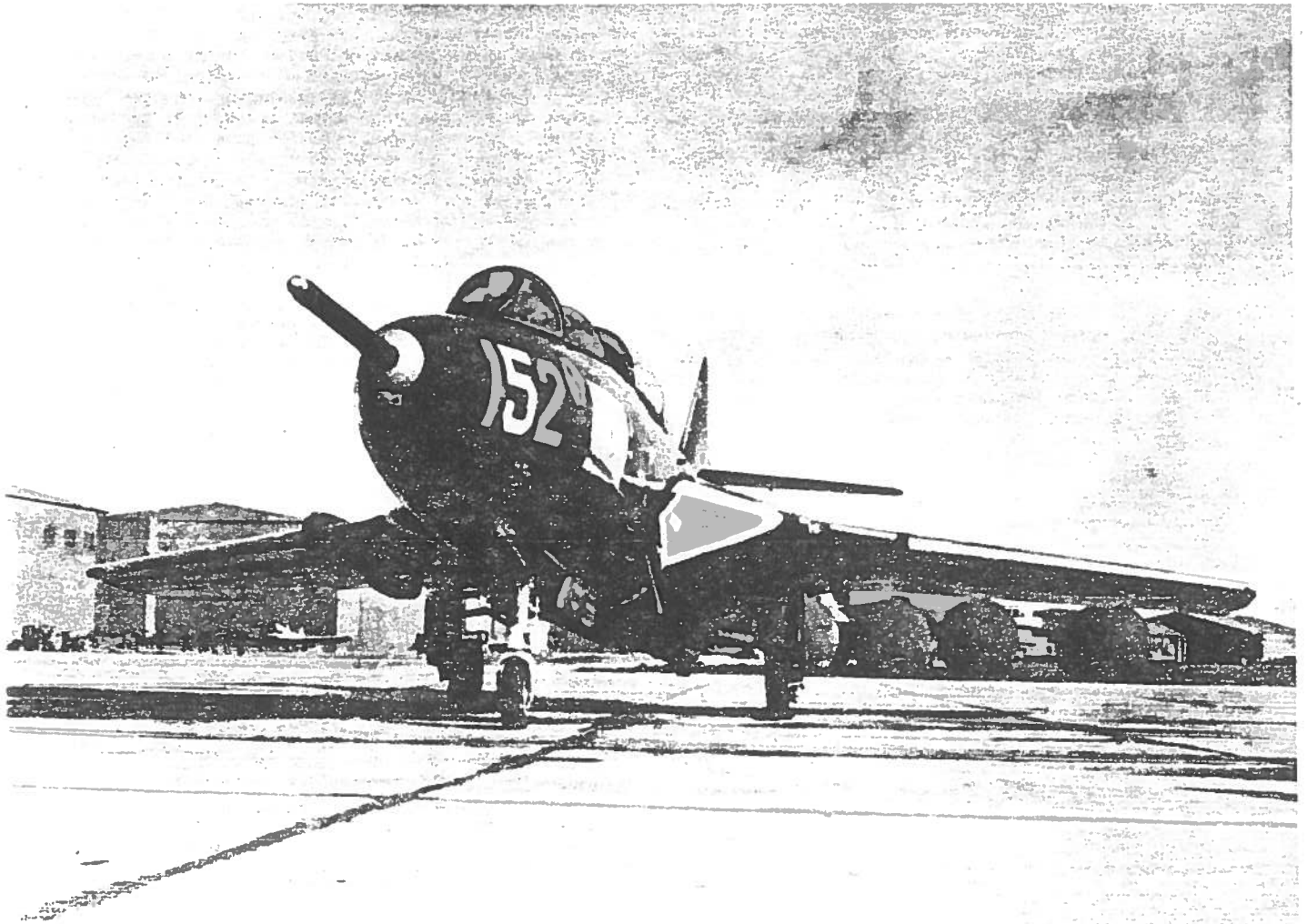


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January 1980

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the newsletter of the Small Air Forces Clearing House

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THE SAAF MUSEUM, 32 pages 8-3/4 by 6 inches, 20 photos, and histories of a/c in their collection, \$1.25

TYPY BRONI I UZBROJENIA #58, SAMOLOT MYSLIWSKI SPITFIRE Mk I-V, K. Chołoniewski. 20 pages 6 1/2 by 9 1/4 inches, 14 photos, 14 color side views, & one color four-view drawing. All of Polish Spitfires. \$2.25.

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COVER COMMENTS: Argentine TF-9J Cougar 3-A-152 of the 1^o Escuadrilla Aeronaval de Ataque in late 1963. Note absence of outboard wing pylons. An article on the service of the aircraft type in Argentina begins on page 48 of this issue. (Jorge Nunez)

EDITORIAL: For the last 6 months all my time has been taken up finishing a manuscript for a book in time to meet a December deadline. The consequent neglect of the SAFCH has had several consequences. (1) To get this issue out on time, I had to choose manuscripts that required the least amount of editorial work, without regard to the order in which they were received. If your submission has not yet appeared in the SAFO, please bear with me. (2) Also missing from this issue are the usual columns of reviews, letters, and abstracts. These require a lot of time to assemble, particularly if I don't keep up by typing them as they are received. Once again, these will appear in print as soon as possible. However, I will mention some particularly important items at the end of this editorial, leaving full reviews for a later time. (3) As you might imagine, my pile of unanswered correspondence is huge. I've begun to answer these, but it will take a long time to catch up. If I've failed to respond to something very important, I would appreciate a gentle reminder.

Items deserving special mention include:

Wesley Moore has come out with 2 excellent products that should be of great interest to SAFCH members: An injected-moulded kit of the Ikarus IK-2 in 1/72 scale (\$6.00) and a decal sheet for 1/72 scale Yugoslav Fury, Hurricane, Bf109E, IK-3, & IK-3 (\$2.00). Price includes postage to North America but add 15% for overseas airmail. Send orders to Wesley Moore, 310 Bellevue Ave. E, Seattle, WA 98102.

Carl Vincent has published an excellent book, A THOUSAND SHALL FALL, by Murry Peden. It describes the experiences of a Canadian bomber pilot in WWII and will probably be one of the classics in its field. Price is \$18.95, but Carl is offering it to SAFCH members for \$15.00. Order from Canada's Wings, PO Box 393, Stittsville, Ontario K0A 3G0, Canada.

I'd like to make mention of MILITARY AVIATION REVIEW (12 issues £8.40 from Brian Pickering, 16 Sleaford Rd., Cranwell, Sleaford, Lincolnshire, NG34 8BY, England) and APAM (4 issues \$8.00 from APAM, PO Box 51, Strathfield, N.S.W. 2135 Australia).

The following books are available from the editorial office. Only one copy of each is available, so it is first come first served. SHIELD OF DAVID (223 pages) \$12.50. A MAGYAR REPÜLÉS TÖRTÉNETE (388 pages) \$20.00. SAMOLOT MYSLIWSKI I-16 (20 pages) \$2.00. NORTH AMERICAN (FIAT) F-86K (80 pages) \$4.00. DOSSIER F-104 (80 pages) \$4.50. NIEUPOORT MACCHI 11 & 17 (48 pages) \$5.50. DIMENSIONE CIELO 12 - ANTISQM (S2C-5, PV-2, S2F-1) (78 pages) \$5.00. DIMENSIONE CIELO 13 - SOCCORSO (CZ-506, P.136L, HU-16A, H-19D) (73 pages) \$5.00. Only the SHIELD OF DAVID is in English. Prices include postage.

20 January 1980

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THE T-33A T-BIRD IN LATIN SERVICE

SAFCH Project 3, Report #3
By Nick Waters III, SAFCH #2

The Lockheed T-33A makes up an important part of many of the Air Forces in Central and South America.

In many cases it not only serves in the training role, but is the primary tactical aircraft in the fighter/COIN role as well.

The following countries operate the T-33A, some referring to the aircraft as an AT or FT-33:

Bolivia
Brazil
Colombia
Cuba
Dominican Republic
Ecuador
Guatemala
Honduras
Mexico
Nicaragua
Peru
Uruguay

This article is not intended to be a final study of the history of this aircraft in Latin America, rather it is for the modeler, with the main thrust of the information toward markings and color schemes. Limited historical facts are presented here to bring the aircraft into focus and as a start point for the historians within SAFCH.

I know that there are holes in my information. Once again I request that any member with corrections, additions, or comments please contact me.

The designations AT and FT are somewhat misleading. The T-33A has the provision for two .50 cal guns in the nose and two wing hard points for bombs, rockets etc. This is a standard fitting. Most if not all T-33A's delivered into Latin America were delivered in an unarmed status, the guns added later.

The provision for armament in the aircraft was to serve in the armament training role in the USAF.

Also included in the inventories of some Latin Air Arms is the RT-33A, a recon version of the basic trainer. This aircraft has an entirely new nose section housing cameras. It is a single seat aircraft, the aft seat being removed to make room for electronics, in most cases.

Some of the countries operate the T-33A/N Silver Star, the Canadian built version of the T-33. There are minor airframe differences between this aircraft and a Lockheed built T-33, be sure to check your references on this one.

The following is a summary of facts and color information on the countries listed.

Bolivia:

The T-33A/N Silver Star version serves in Bolivia. These aircraft are Ex-Canadian Armed Forces aircraft. 5 of those received were obtained in trade for ex FAB F-51D Mustangs.

Serials known: FAB 611, 615, 616, 601, 603, and 607. These aircraft entered service in 1973, a total of 18 aircraft entered service to date.

Color Notes;

1. the bare metal a/c have very bright red tip tanks. The slides I have seen show the aircraft to be very clean. Markings are as per drawing. All warning marks, and servicing stencils are in ENGLISH.

The camouflage a/c bare a very unusual scheme, I do not have the FSN #'s for the colors. Color divisions appear hard. The only markings visible appear to be the fin flash and the a/c serial number. I have no info on the wing camouflage pattern or wing markings if any.

Colors are red-brown, med green and dk green over lt grey.

These aircraft serve alongside at least 8 F-86F Sabres (some reports these to be CL-13 Sabre Mk 6's also ex-CAF) in the Grupo de Caza of the FAB.

Brazil:

The largest operator of the T-33 in Latin America, the FAB received at least 45 aircraft. These aircraft are designated either AT or FT-33A in Brazilian service, and are assigned to the following units:

1 Grupo de Aviao de Caza
14 Grupo de Aviao de Caza

Serials known: FAB 4362, 4367, 4328, 4360, 4337, 4365, 4318, and 4359.

Color Notes: FAB T-33's were either painted Alumilac (Aluminum lacquer) or Lt Grey overall.

Examples of Lt Grey machines are: AT-33A 4367, 4360, 4365. Alumilac machines are: AT-33A 4318, 4362, and 4328. All aircraft had the intakes painted red as per detail drawing.

For a/c 4318 see detail drawing for details of the Southern Cross marking.

Rescue arrows are yellow and ejection seat markings are in Portuguese (see detail page)

There is an extra red stripe on the aft fuselage and the words CUIADO JATO, this is for JATO attachment (see details page).

Squadron marking carried on some aircraft is detailed as follows: White: face, half of left sleeve, clouds, color spikes and hands/feet.

Lt Blue- background

Red- outline

Black- club, legend "To LH Manjando"

Blue-grey, rest of body.

Chile:

The FACH operated at least 8 T-33A's assigning them to Grupo 12 alongside that units F-80C's.

I have no photographic coverage of a Chilean T-33. The accompanying drawing is from a description of the aircraft, and should be considered provisional. If any member can confirm (photo) this information I would appreciate hearing from them.

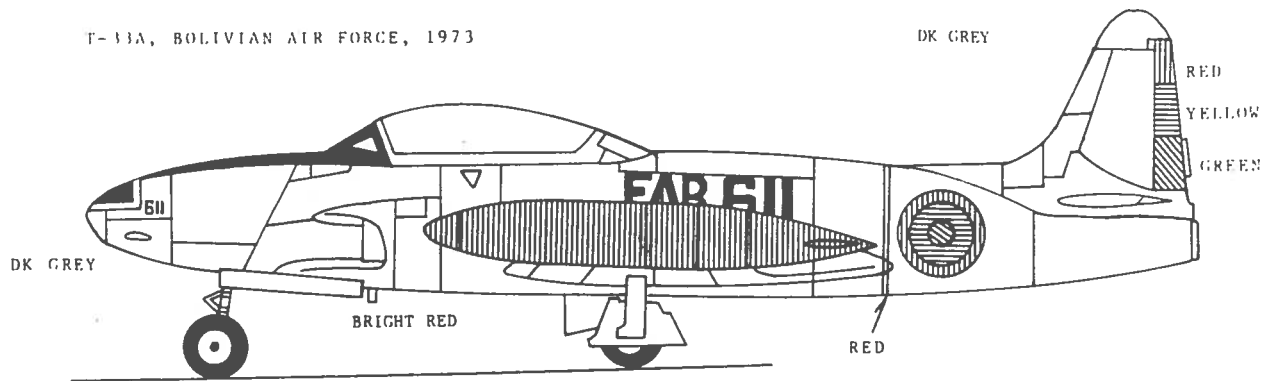
Cuba:

Here is a large hole in my information. I have no coverage of Cuban T-33's at all. All I have ever seen was an aerial shot of one on display at San Antonio de Los Baños airfield near Havana. The aircraft was bare metal overall.

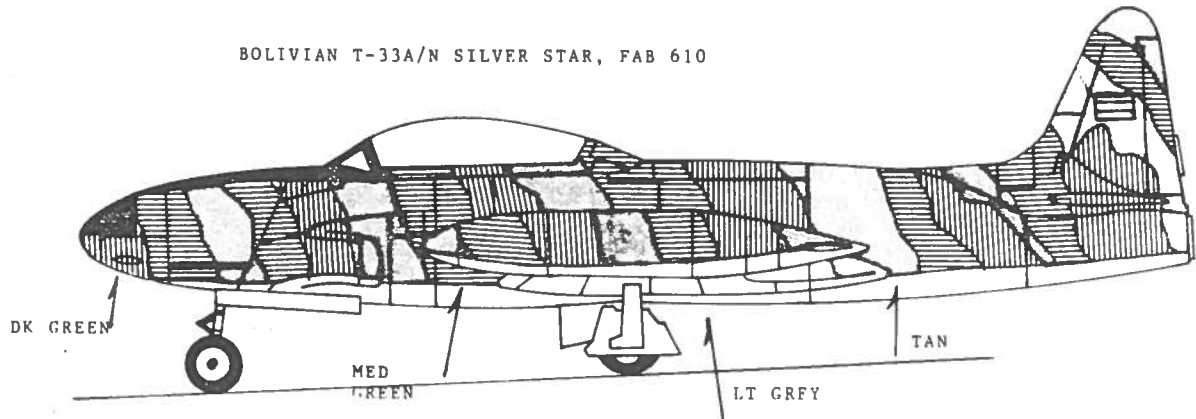
I need information on these aircraft from any member. I know that they were active during the Bay of Pigs combat.

Text continues on page 40

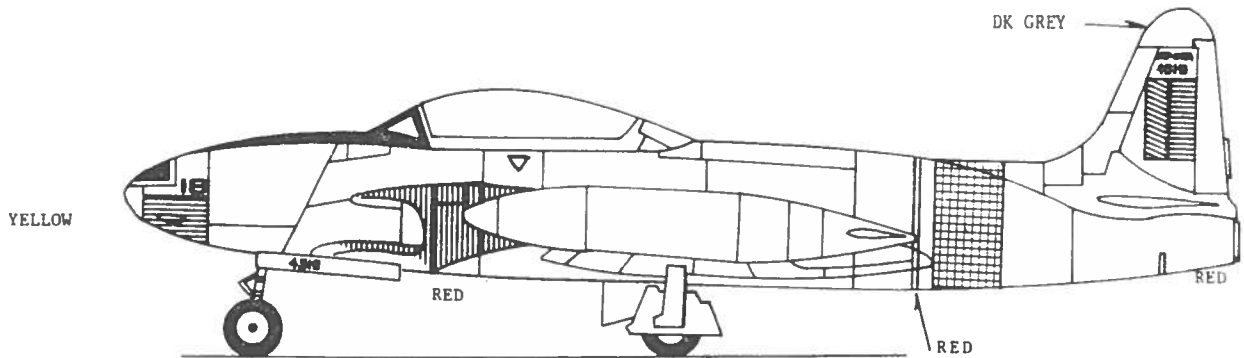
T-33A, BOLIVIAN AIR FORCE, 1973



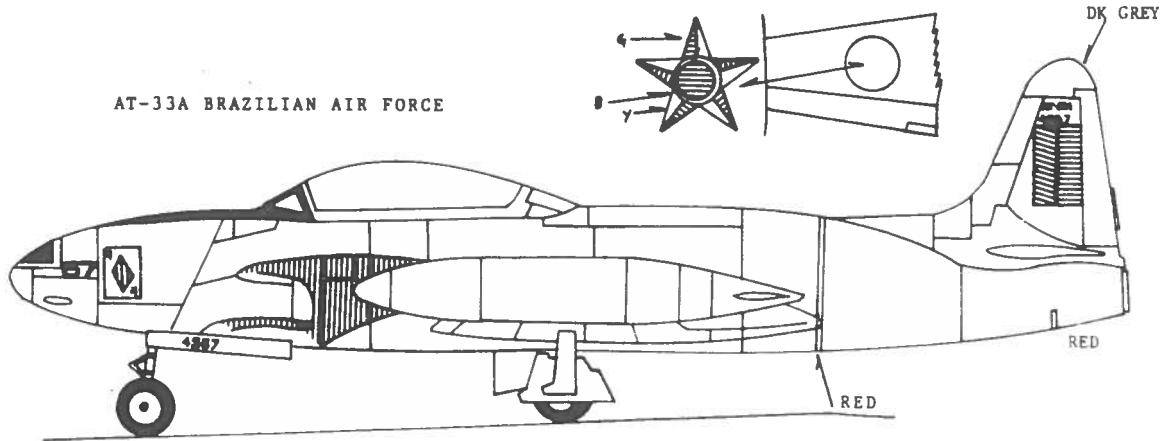
BOLIVIAN T-33A/N SILVER STAR, FAB 610

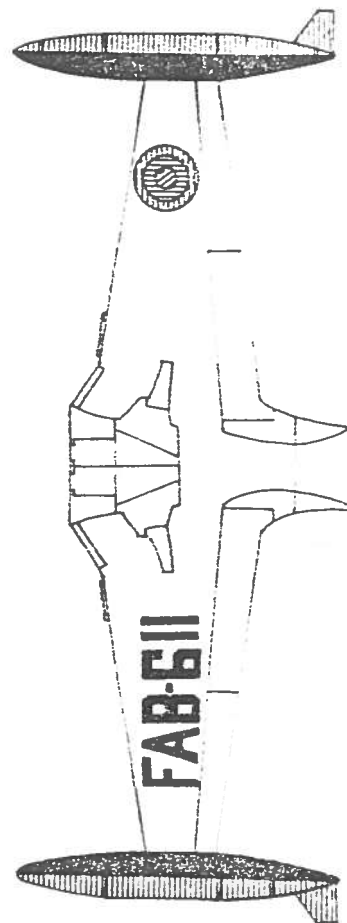
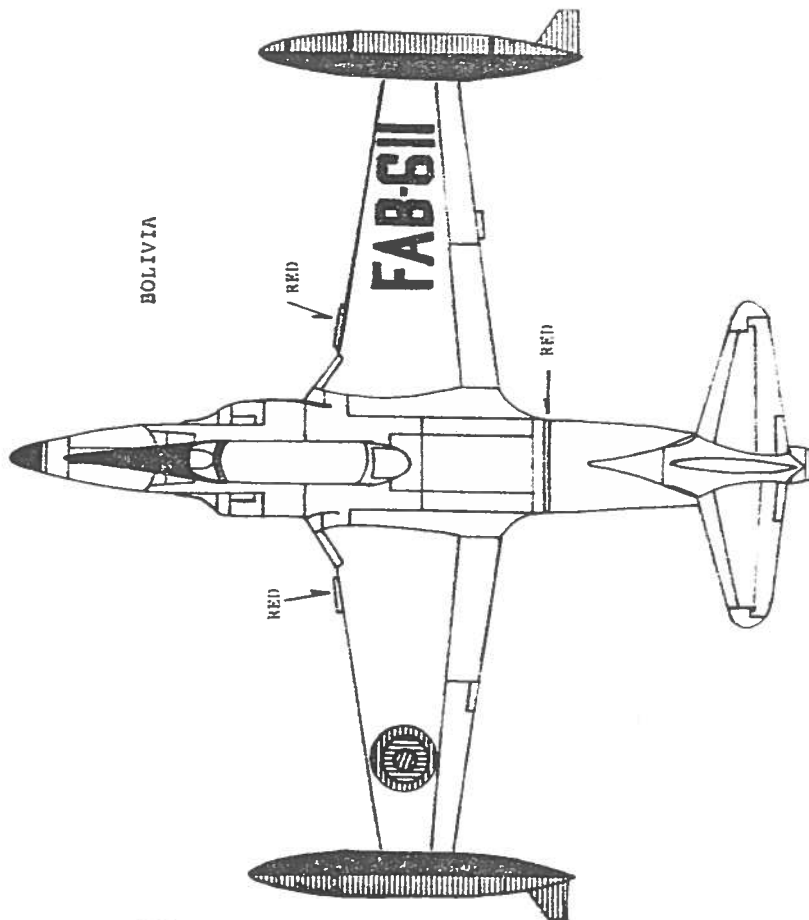
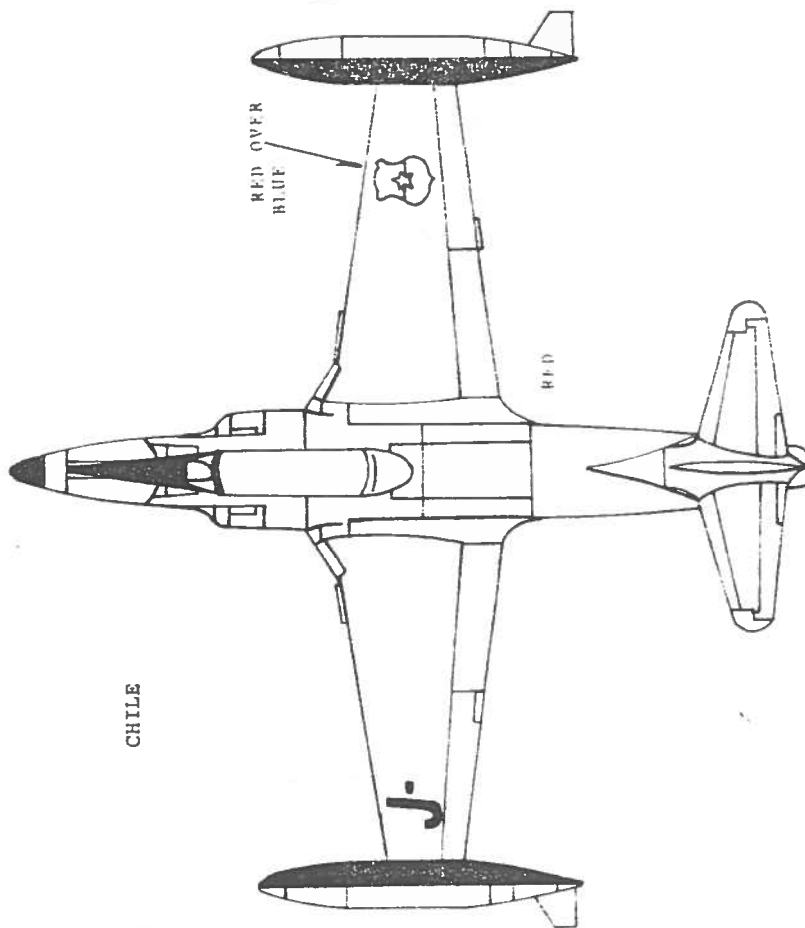
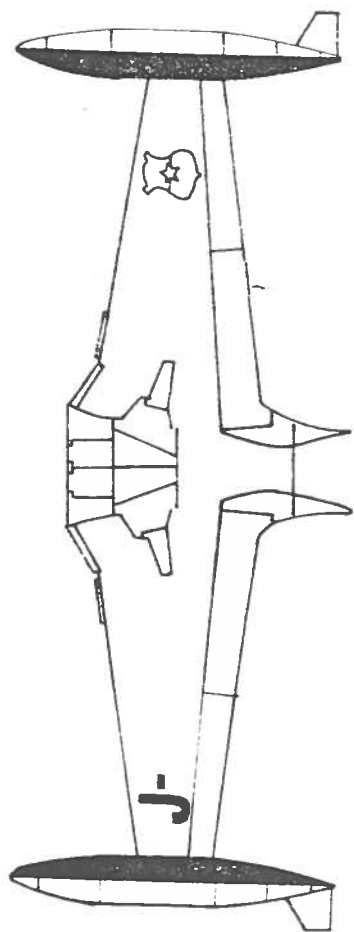


AT-33A, BRAZILIAN AIR FORCE

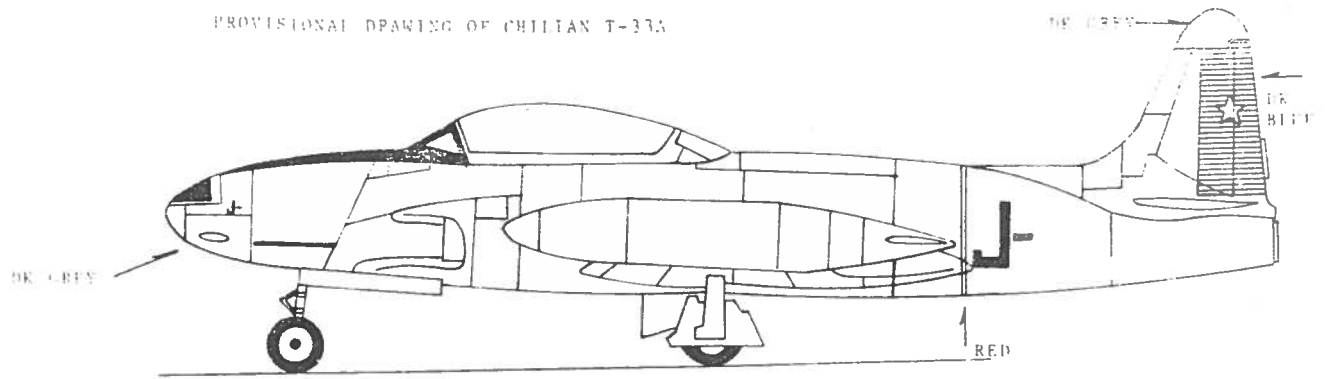


AT-33A BRAZILIAN AIR FORCE

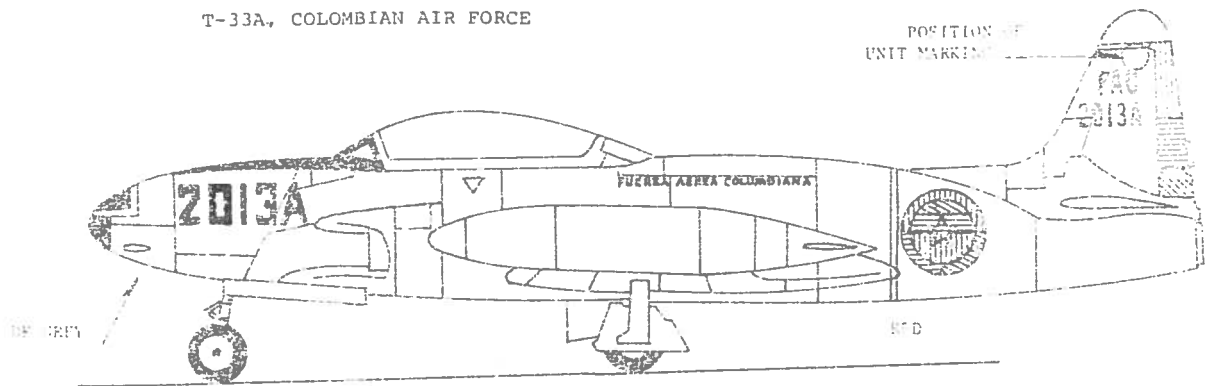




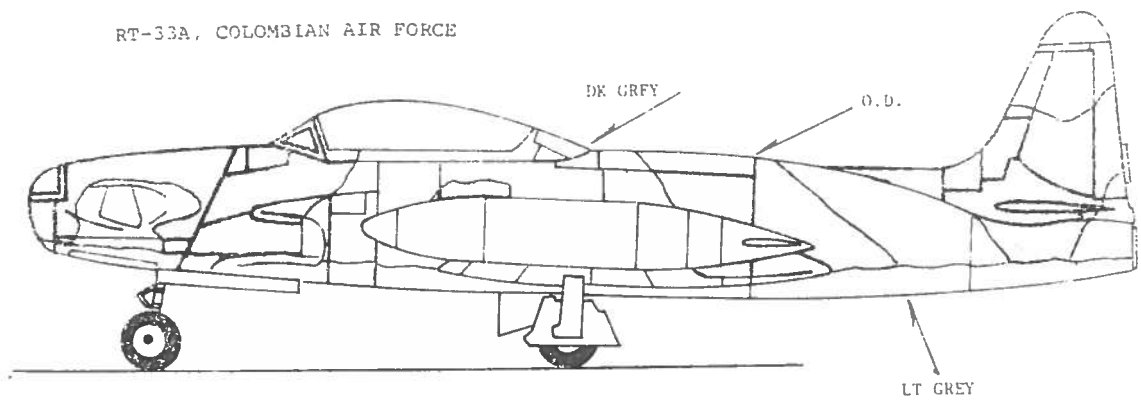
PROVISIONAL DRAWING OF CHILIAN T-33A



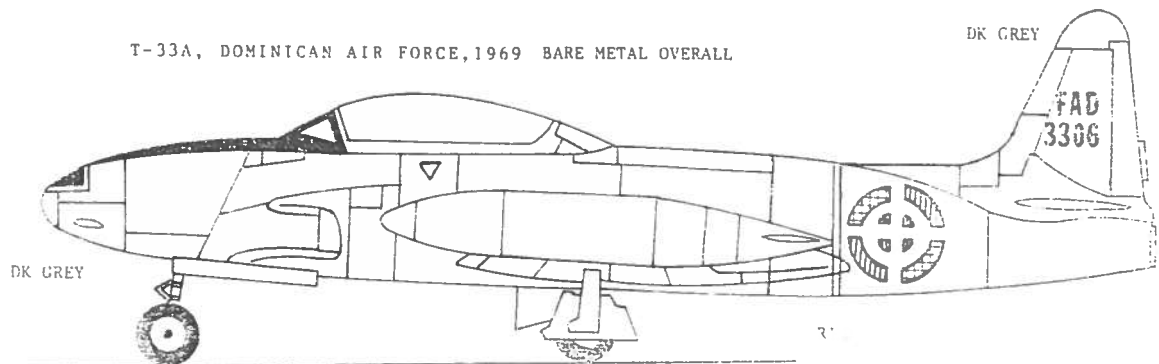
T-33A, COLOMBIAN AIR FORCE

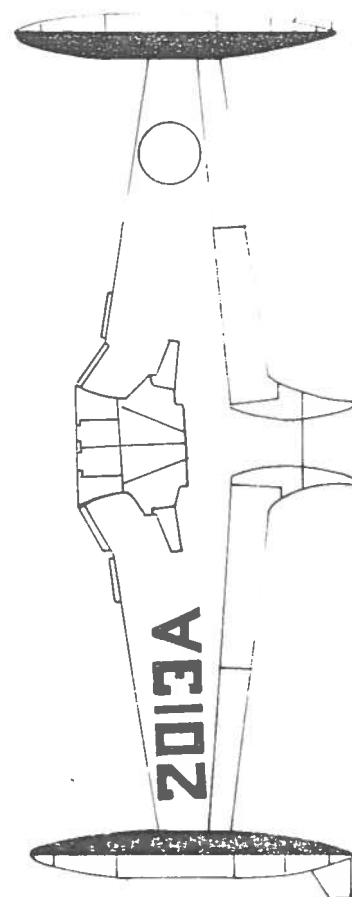
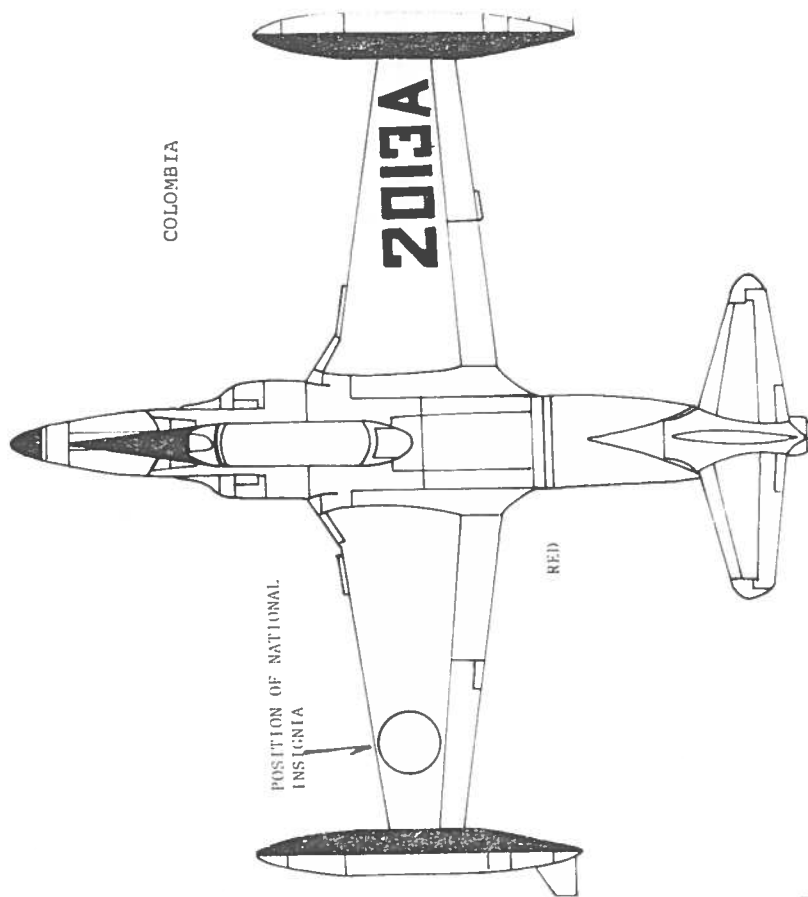
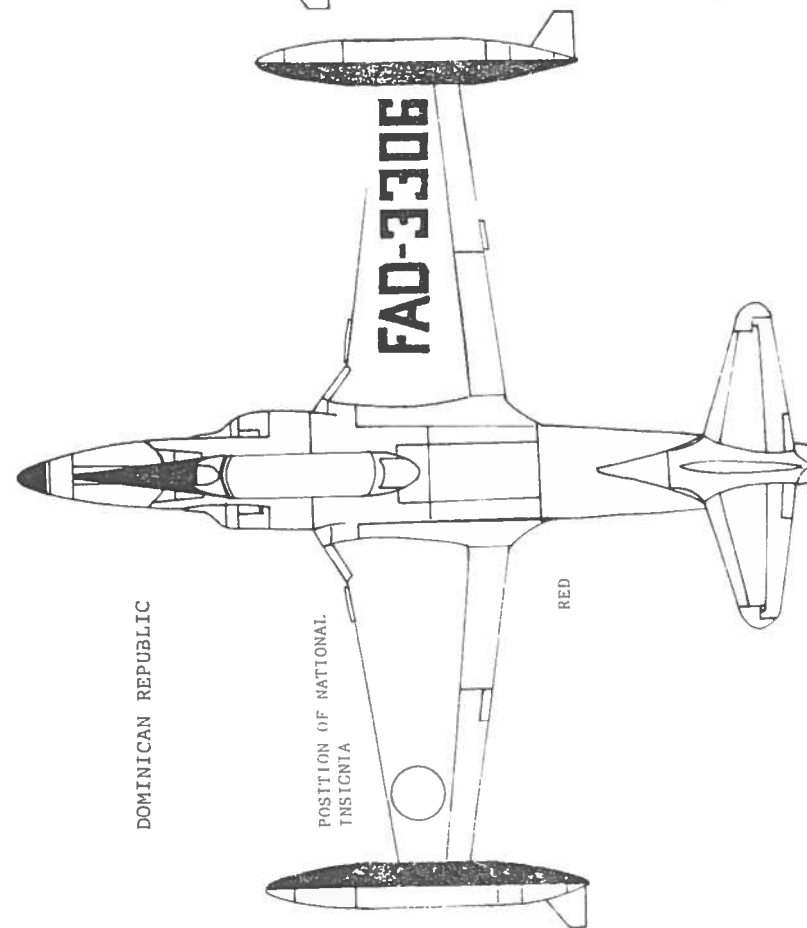
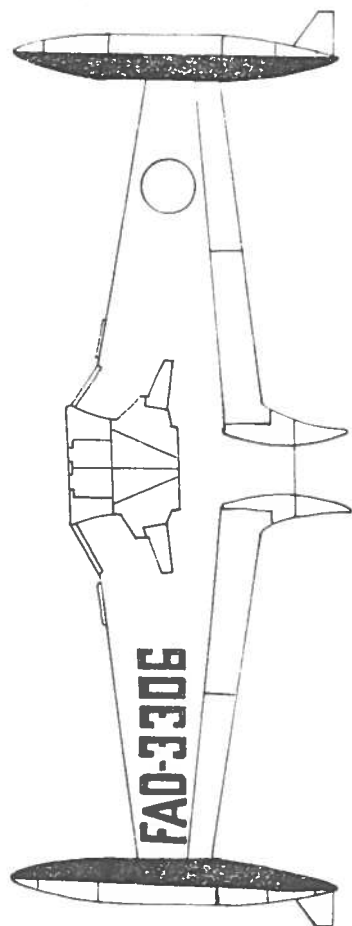


RT-33A, COLOMBIAN AIR FORCE

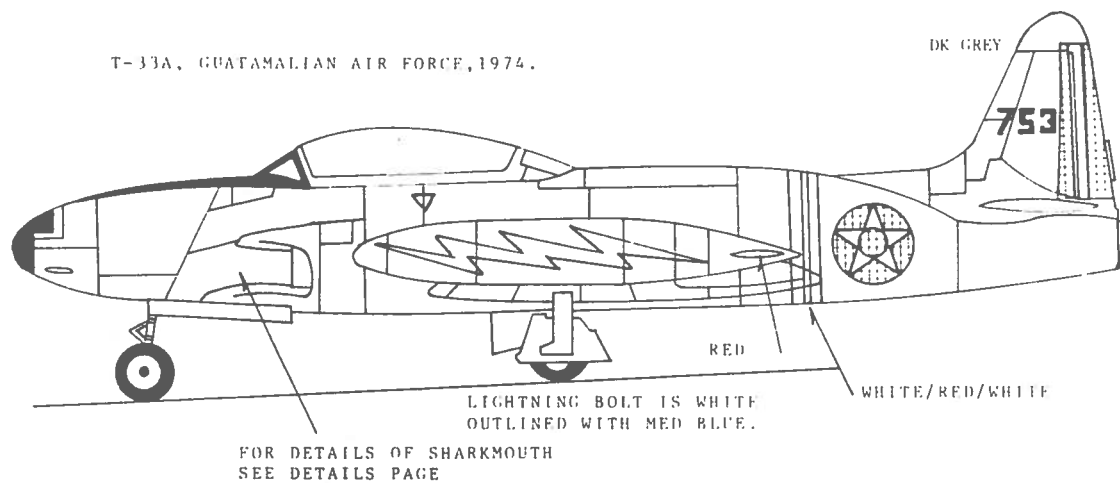


T-33A, DOMINICAN AIR FORCE, 1969 BARE METAL OVERALL

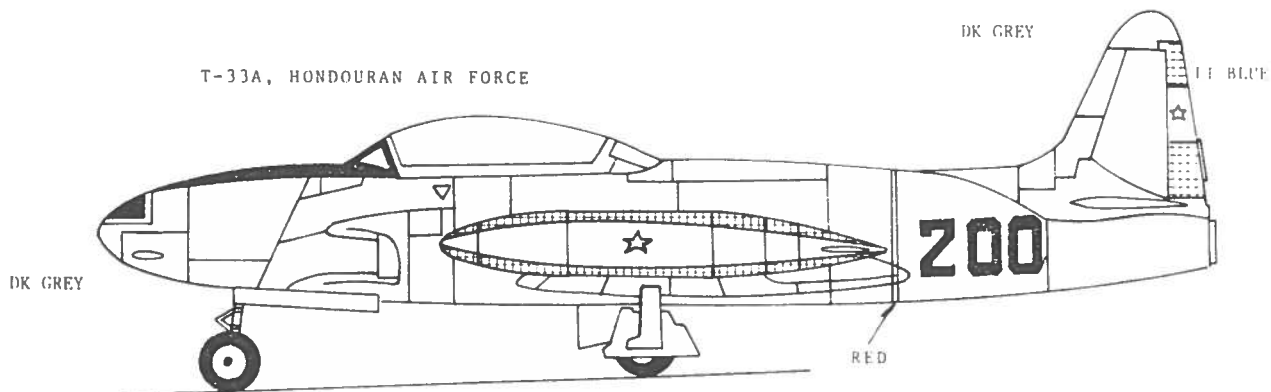




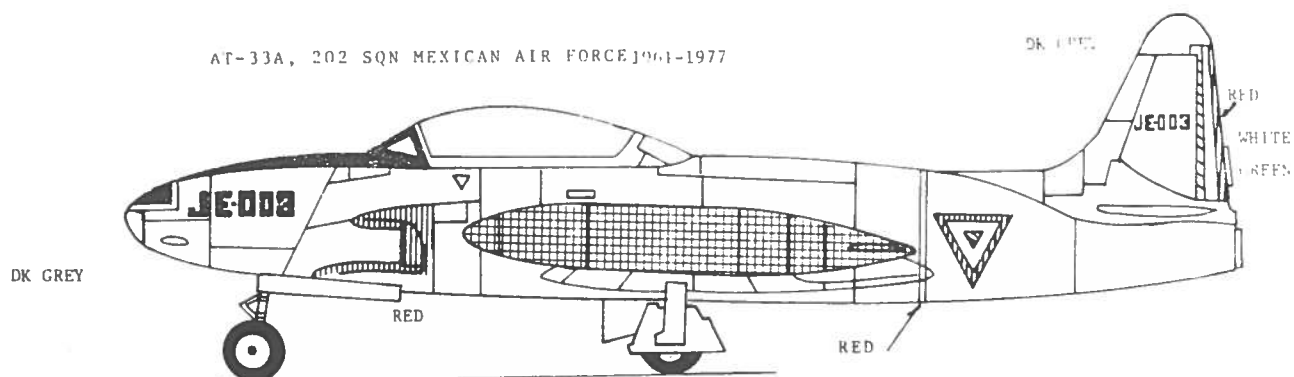
T-33A, GUATEMALAN AIR FORCE, 1974.



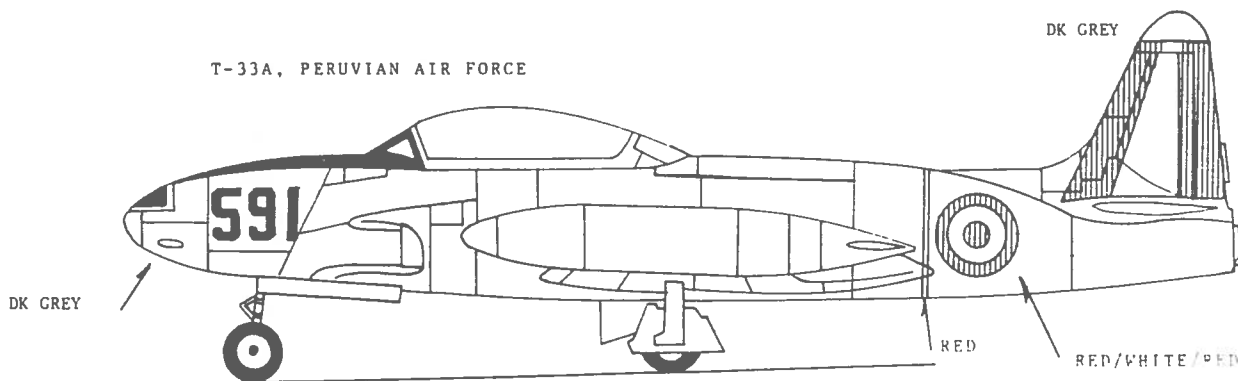
T-33A, HONDURAN AIR FORCE



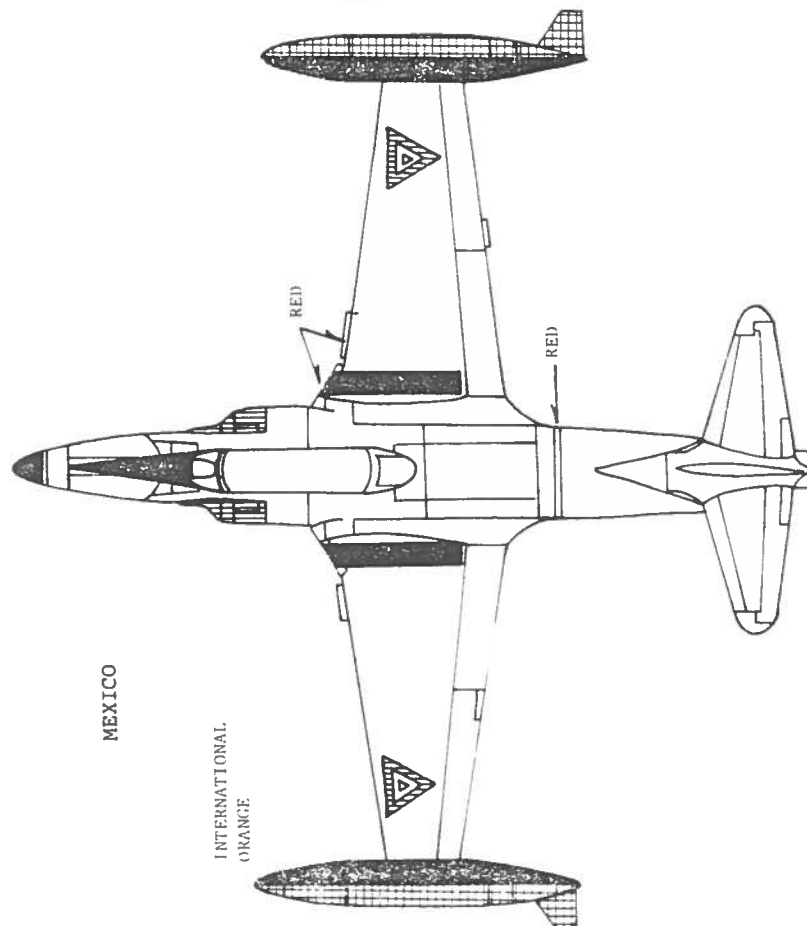
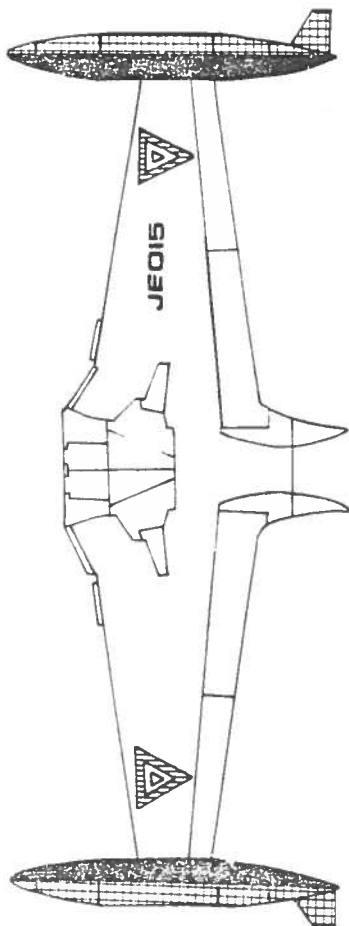
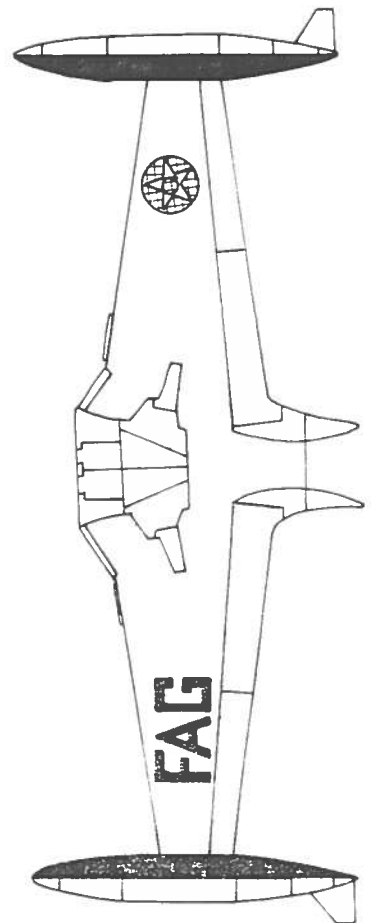
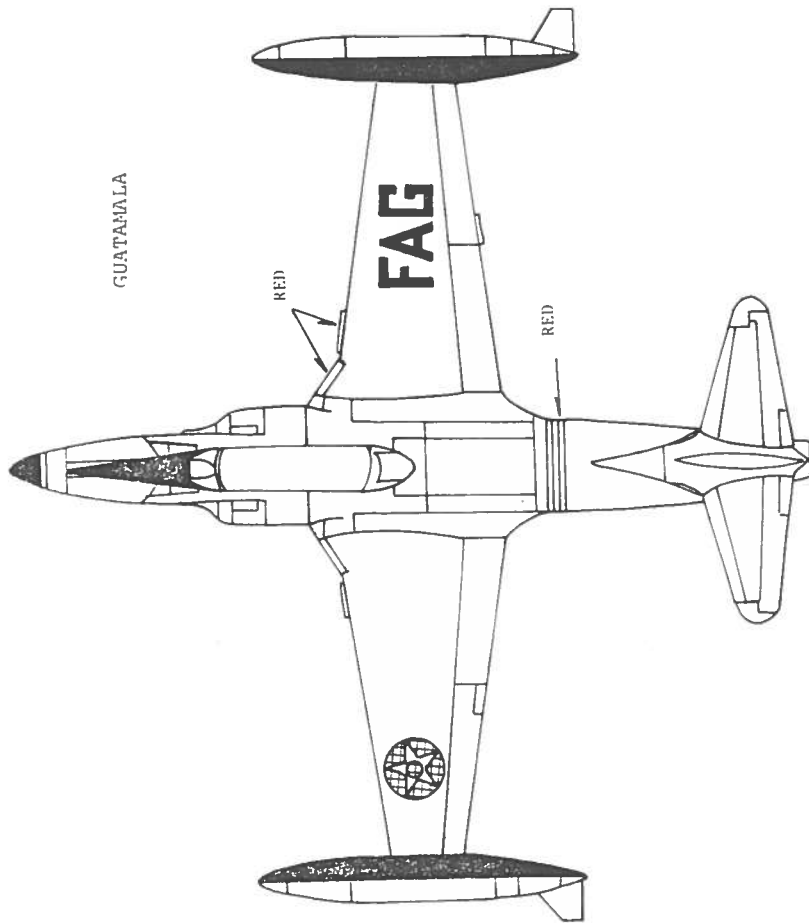
AT-33A, 202 SQN MEXICAN AIR FORCE 1961-1977



T-33A, PERUVIAN AIR FORCE

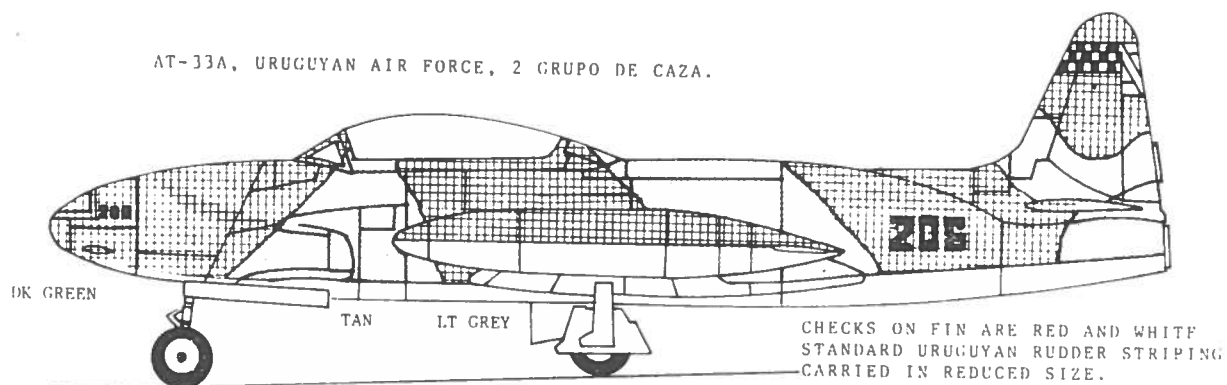
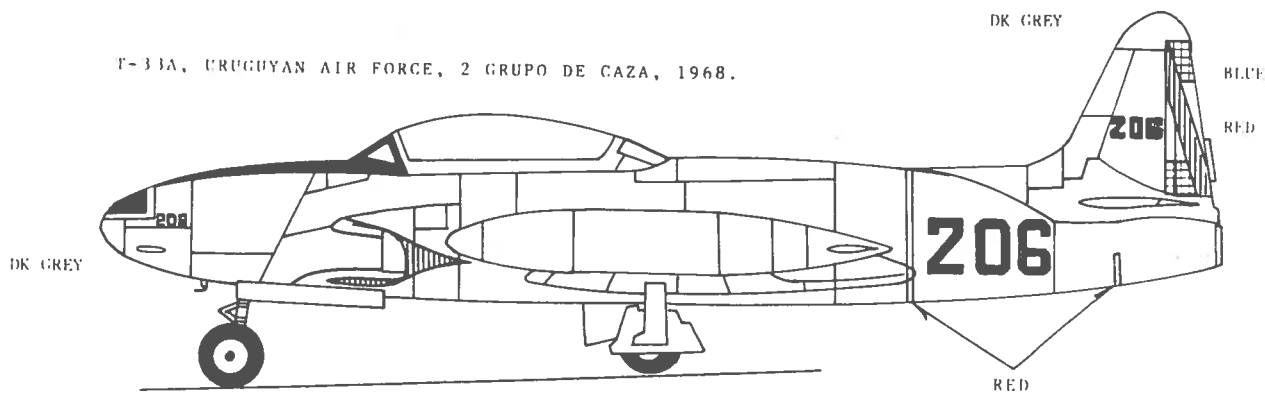


GUATEMALA

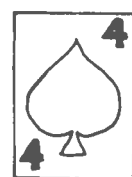


MEXICO

INTERNATIONAL
ORANGE



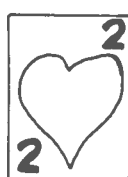
DETAILS OF AT & FT NOSE MARKINGS, BRAZILAIN AF



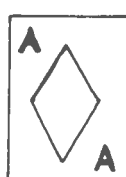
NUMBERS
FIGURE BLACK
TF-33A, 4367
LT GREY OVERALL



NUMBERS
FIGURE BLACK
TF-33A, 4328
ALUMINAC
OVERALL



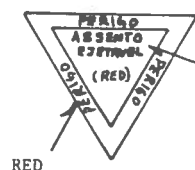
NUMBERS
FIGURE-RED
AT-33A, 4362
ALUMINAC
OVERALL



NUMBERS
FIGURE-RED
TF-33A, 4360
LT GREY OVERALL

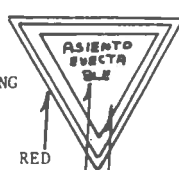


BRAZILIAN SQUADRON MARKING



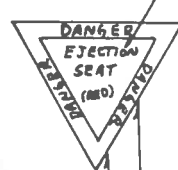
RED

WHITE
LETTERING

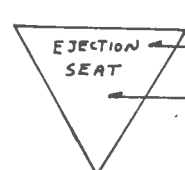


RED

WHITE/RED

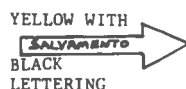


RED



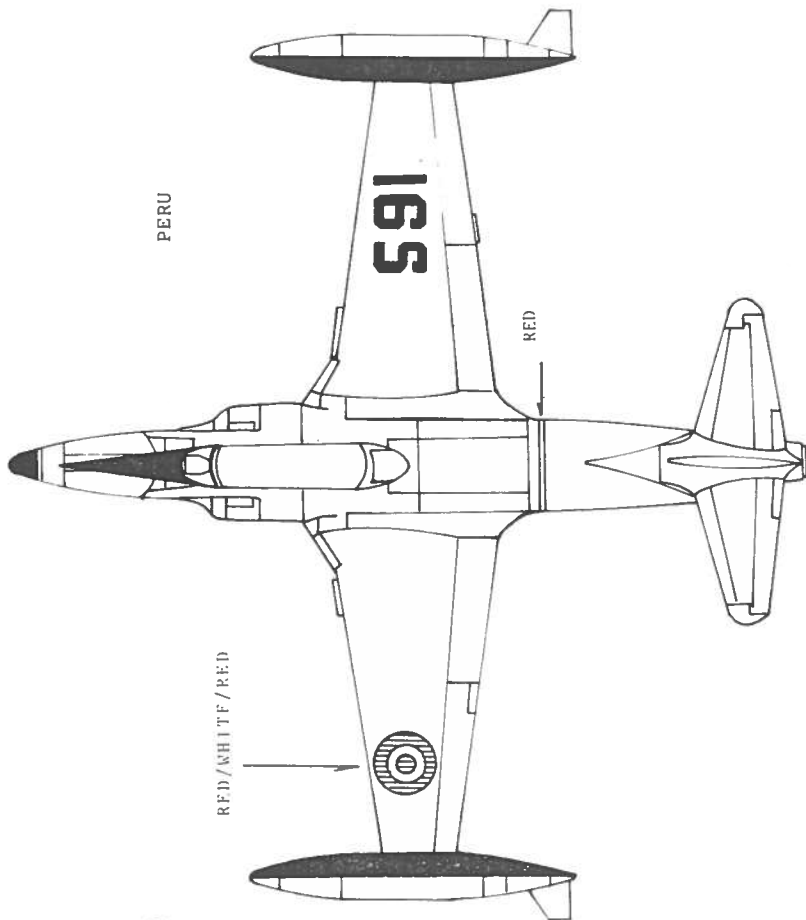
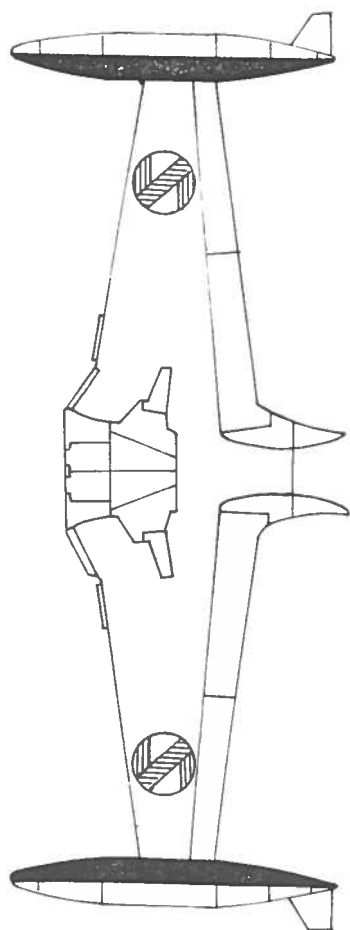
WHITE

RED



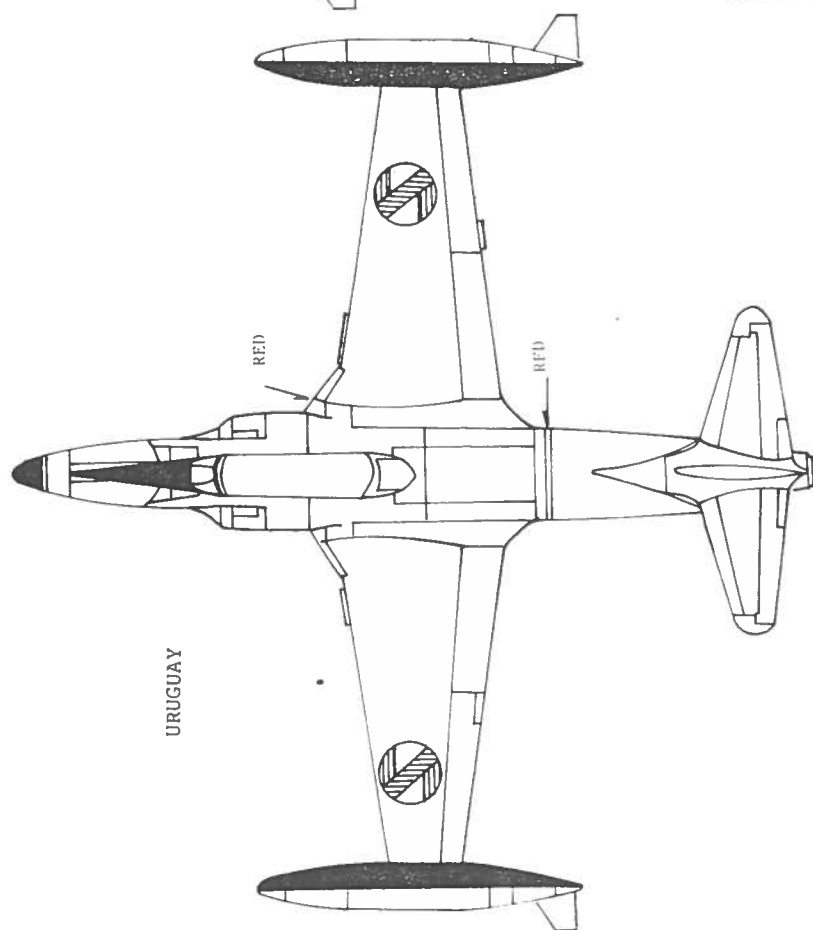
BRAZILIAN RESCUE MARKINGS

DETAILS OF EMERGENCY MARKINGS: LEFT TO RIGHT:
BRAZILIAN, URUGUAYAN, AND BOLIVIAN (2) EJECTION SEAT
MARKINGS



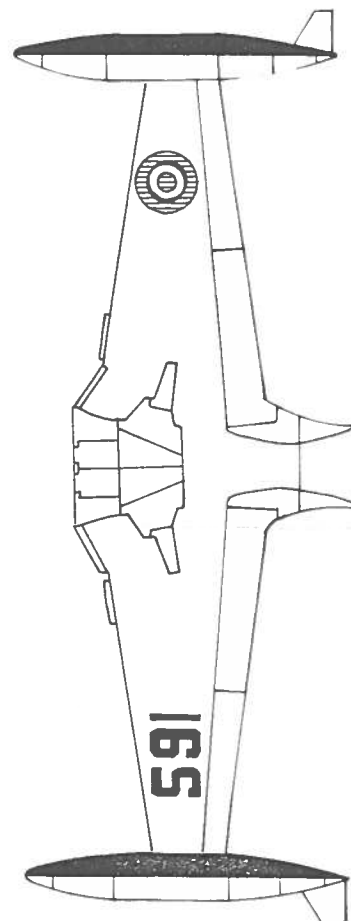
RED/WHITE/RED

RED



RED

RED



Colombia:

The first six T-33's to enter service were T-33A/N Silver Star a/c. These were followed by additional a/c the latest being in 1978 (12). Total is at least 32 aircraft, 4 of which are RT-33's. This makes Colombia the second largest user of the type in the area,

Serials known: FAC 2072A, 2015, 2013A.

Color Notes:

The bare metal a/c appeared very clean and polished. The schemes varied slightly during its service life. At one point they did not carry the FAC legend on the fuselage sides, at another they did not carry the FAC legend over the serial on the fin. There are two squadron badges seen, neither of which is clear enough to present here. One was high on the fin of FAC 2013A.

The camouflaged RT does not appear to have any markings. At least none are visible in the slide I have. Also the aircraft did not have tip tanks installed so I do not have any info on the scheme of the tanks, nor the wing pattern. Additional information on this aircraft would be greatly appreciated.

Ecuador:

Another no-info country. I have nothing on which to even venture a guess as the colors and markings carried. At least 12 a/c were received. These aircraft are reportedly to be phased out in favor of the Strikemaster Mk 82.

Guatemala:

At least 5 T-33's were acquired in 1971. These aircraft equip Esquadron de Caza-bombardeo.

Serials known: FAG 749, 735, 728.

Color notes; See details page for details of sharkmouth. One set of photos of these a/c show that the fuselage stripes were at one time (1971) only the standard red turbine warning stripe. I do not know at what point they were changed to the white/red/white striping. See details page for details of lightning bolt design on tanks.

Honduras:

Very little is known about these aircraft. At least three were received. I have a slide of FAH 200. Other serials are unknown. Some reports these a/c to be RT's but FAH 200 is definitely a T not an RT.

Color notes: Aircraft is overall lt grey. Tip tanks painted in national colors. I have no info on wing markings if any.

Mexico:

At least 15 T-33A's are operated by 202 squadron of the MAF. I do not have information as to when these aircraft first entered service, however, I suspect that it was in 1961.

Serials known: JE-001, 006,003, 015.

Color notes: There have been many progressive changes in the color schemes of Mexican T-33's.

aircraft were delivered bare metal overall with the basic markings as per drawing.

1965- intakes were painted red
1961- tip tanks painted outer half international orange, inner half remained black.
1972- vertical stabilizer minus rudder area painted international orange (see details page).
1977- a/c now painted lt grey overall, other markings remain the same.

Nicaragua:

The FAN received at least 6 T-33's. This is all the info I have on these aircraft. I need photographic coverage of these a/c.

Peru:

The FAP operated at least 8 T-33A's alongside the F-80C's.

Serials known: 591

Color notes: a/c bare metal overall, all others as per drawing .

Uruguay:

Six a/c received to operate alongside the F-80C's of 2 Grupo de Caza. These aircraft were due to phase out, but the lack of a replacement a/c has left the future unsure.

Serials known: FAU 202, 206, 201 , and 205.

Color notes: The squadron badge is carried on the right side only. A/C 202 has red/white checks on the fin. Others I have coverage of do not, this might be due to time differences in the photos.

The camouflage scheme is new, I have no info as to date introduced. See details page for details of fin markings. Wing markings and wing camouflage pattern are unknown. I do not know if the unit badge is carried on both sides of the fin or not.

I am in the process of finishing up art work on an article on the A-37B and B-26. In relation to the latter, I need info on the following:

B-26's of Cuba, I have seen a shot of FAR 933 reportedly a ex-CIA machine in Miami.

B-26's of Peru

B-26's of Guatemala, I have seen one shot of these dated 1969.

B-26's of Dominican Republic, I have one shot of an FAD machine that appears to be converted to the transport role, the nose is not visible.

Any info on these aircraft, and in particular photos and color information will be greatly appreciated.

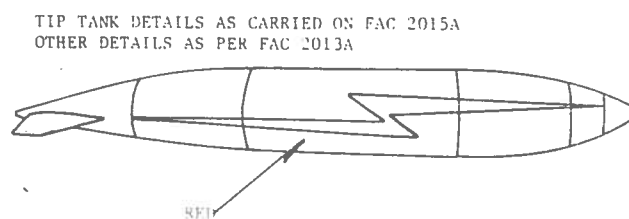
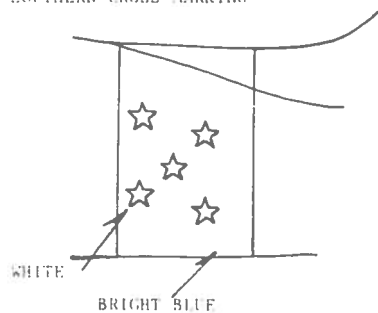
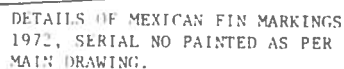
Information on this or any other SAFO project held is information that helps no one. If you have any scrap of information, however slight, pass it along. It might be the one piece of missing data that could spell the difference between a complete work and a work with holes in it.

Any corrections, comments, or additions to the information presented here, or in any of the other work; I have done in SAFO is welcomed. Please contact me at the below address.

Sources of information for this article are:

D.P. HAGEDORN, H. ROWE, G. KUHN, R. HANES, GREENS " AIR FORCES OF THE WORLD", AND JORGE PADIN (ARGENTINA).

N. J. WATERS III
AMERICAN EMBASSY
BOX 1
APO SAN FRANCISCO 96356



FORÇA AEREA PORTUGUESA

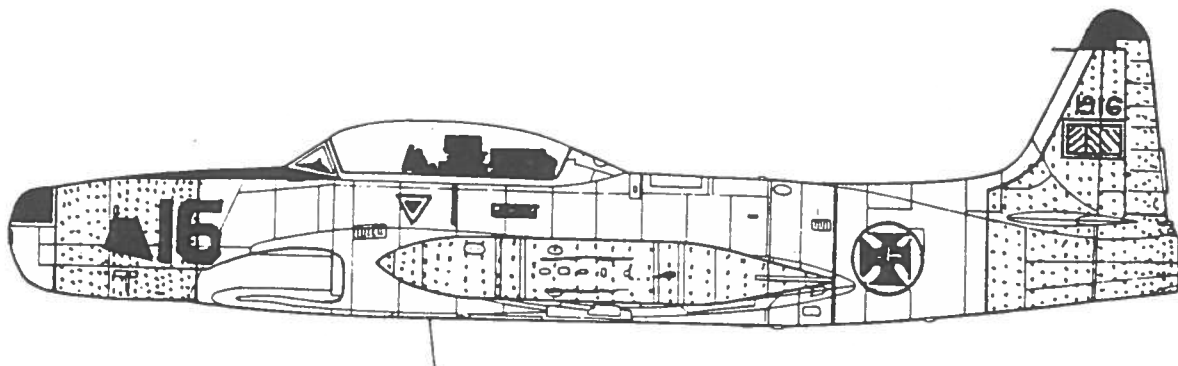
JET TRAINERS

SAFCH RP #10 REPORT #2

Mick Burton

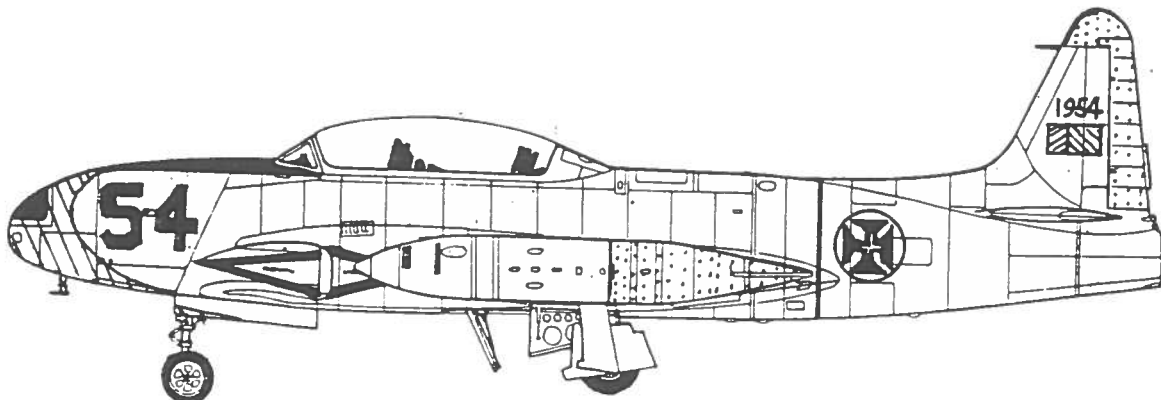
LOCKHEED RT-33A

The Portuguese Air Force uses one RT-33A, an ex-USAF machine (ex 53-5474). It is in an identical scheme to the grey T-33A shown in the previous drawing. An interesting point on the dayglow paint is that the upper facing portions of paintwork are irregularly faded, almost through to the matt white undercoat in places. Black tip to the fin.



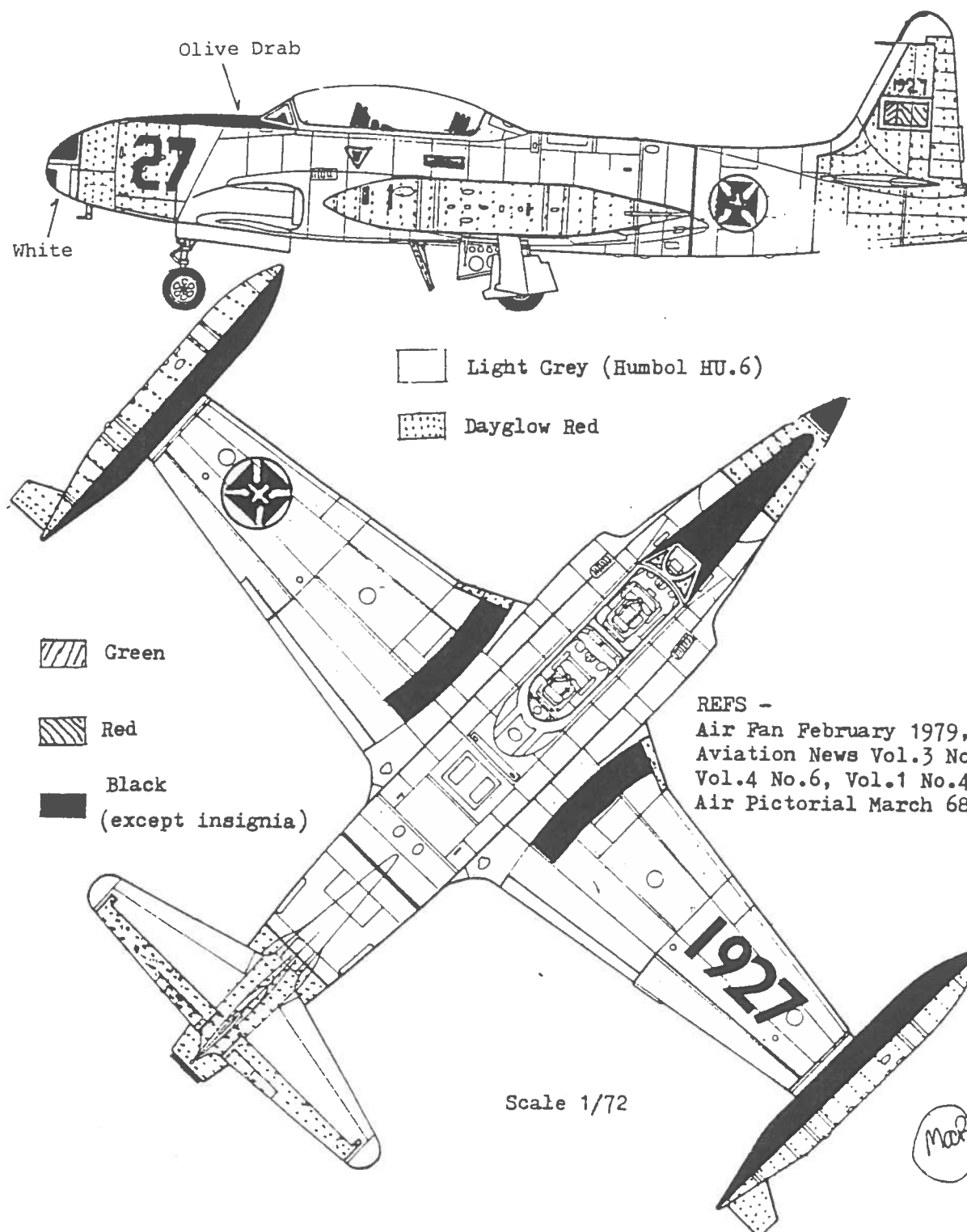
LOCKHEED T-33A

Below, the all-white with red trim T-33A referred to previously. The nose as shown, under fuselage speed brakes and wing leading edges are red in colour. Note that the red continues onto both nose wheel doors. Rear half of wingtip tanks and rudder are in dayglow. Intake warnings are black and similar to those worn by United States Navy T-33Bs.



LOCKHEED T-33A

Fifteen Lockheed-built T-33As were delivered initially serialised from 1901 to 1915. Aircraft 1917 to 1925 were ex-USAF and MDAP deliveries and machines 1951 to 1955 were ex-RACF 'Silver Star' Mk.3s (T-33A-N). Basic finish of Portugese T-33As is light grey overall with dayglow patches as shown below. At least one machine (1954, ex-RCAF 21318) sports an all white finish with red nose, and aircraft 1920 has no dayglow patches.

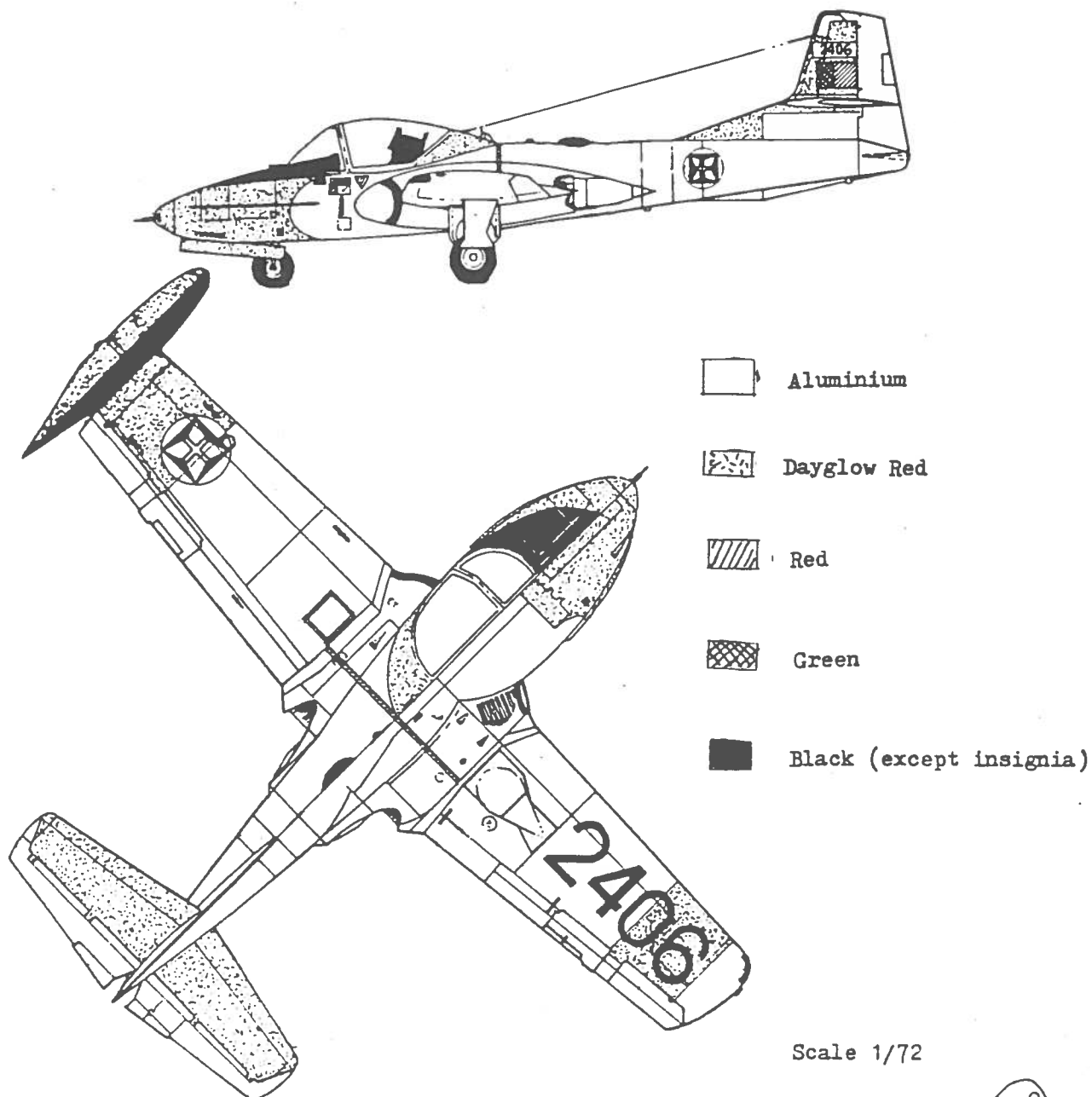


REFS -
Air Fan February 1979,
Aviation News Vol.3 No.20,
Vol.4 No.6, Vol.1 No.4,
Air Pictorial March 68, Aug 71.

CESSNA T-37

Thirty T-37Cs were originally assembled by OGMA, and approximately half have been grounded or cannibalized for spares since. They were serialised 2401 to 2430. The Portuguese Air Force aerobatic team, 'Asas de Portugal', have used aircraft numbers 2406, 2414, 2415, 2423, 2427, 2426, 2429 and 2430. All operational T-37s can be fitted with weapons pylons and tip tanks. The drawing below shows both options and the difference in the wing dayglow patches.

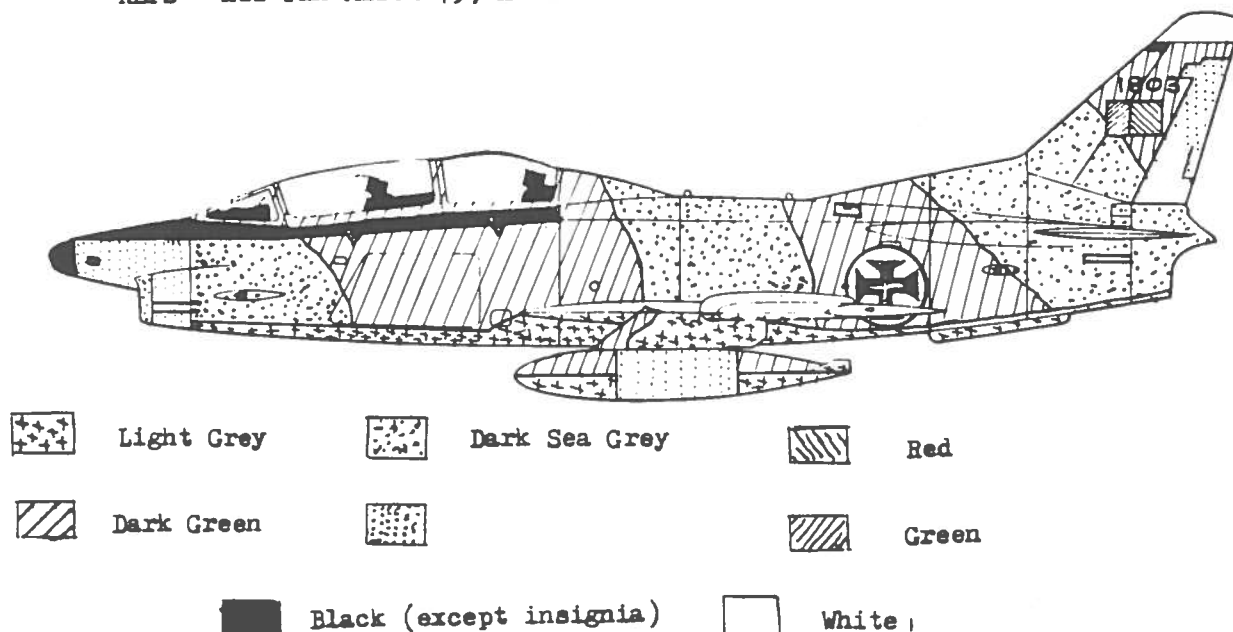
REFS - Aviation News Vol.1 No.4, Vol.3 No.20, Vol.4 No.6, Flying Review International November 63, various Jane's All The World's Aircraft, Spanish and Portuguese Military Aviation by J.M. Andrade.



max

FIAT G.91T

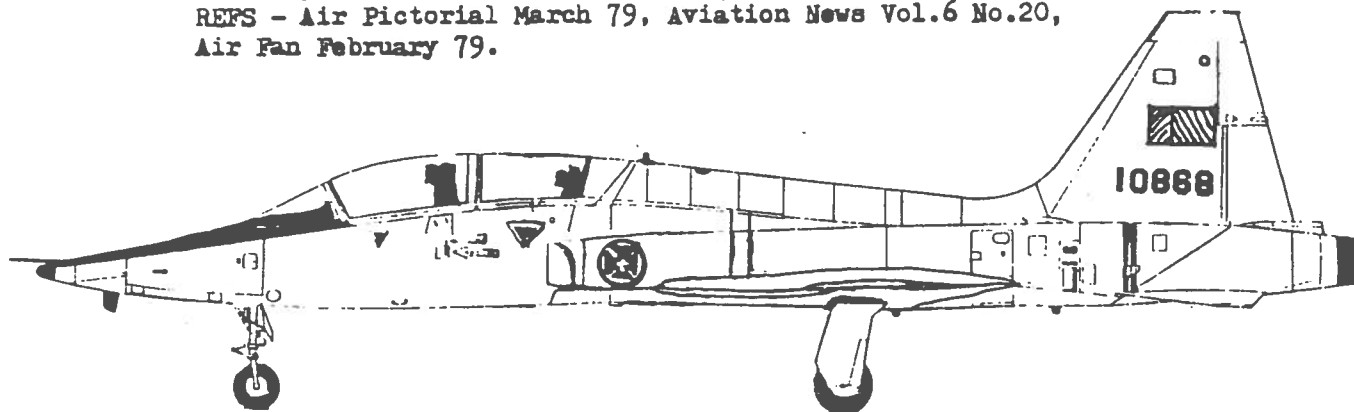
Six ex-Luftwaffe G.91T-3s were received during 1976. They were temporarily allocated serials from 5461 to 5466. They have since been re-registered as 1801 to 1806. Aircraft 1803 is shown below; 1801 and 1802 are in an identical scheme. The other three machines were retained in their original German camouflage. REFS - Air Fan March 79, Aviation News Vol.6 No.20.



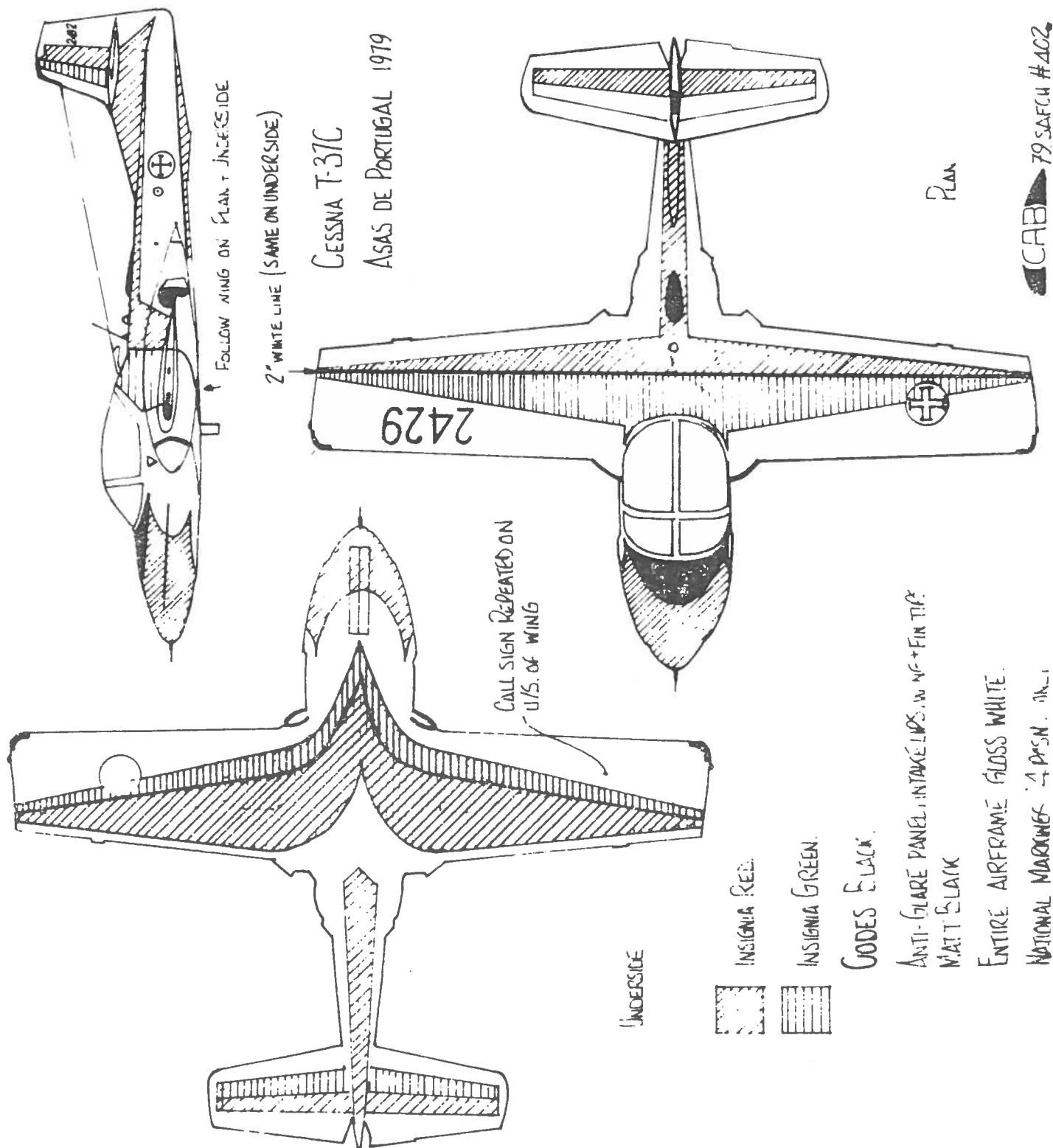
NORTHROP T-38A 'TALON'

The Portugese Air Force operates six T-38As of USAF origin still sporting their overall white colour scheme. No national markings or serials are carried on the wings and the fuselage cross has a dark blue surround to it to distinguish the roundle from the basic finish. The serials are the original American ones, namely 10843, 10853, 10868, 10890, 10897 and 10915. This suggests that the aircraft are on lease pending the delivery of F-5Es later this year (1979).

REFS - Air Pictorial March 79, Aviation News Vol.6 No.20, Air Fan February 79.



Anyone wishing to contribute information on the Portugese Air Force should contact Mick Burton, 6 Eveleigh Rd., Farlington, Portsmouth, Hants., PO6 1DL England.



CESSNA T-37C

ASAS DE PORTUGAL 1979

PLAN

UNDERSIDE

- INSIGNIA RED.
- INSIGNIA GREEN.
- CODES BLACK.

ANTI-GLARE PANEL, INTAKE LIPS, WING + FIN TIPS
 MATT BLACK
 ENTIRE AIRFRAME GLOSS WHITE.
 NATIONAL MARKINGS 4 PASH. ON...

CAB 79 SAFCH #402

THE AVIACION NAVAL ARGENTINA'S COUGARS

A total of two Grumman TF-9J (formally F9F-9T) Cougars was used by the Argentine Navy; 3-A-151 (0516) and 3-A-152 (0517) being delivered in mid-1962. These aircraft operated as advanced trainers with 1^o Escuadrilla Aeronaval de Ataque (1st Attack Squadron) under the command of 1^o Escuadra Aeronaval (1st Naval Air Wing) based at Base Aeronaval Comandante Espora. At this time the squadron was equipped with Grumman F-9B Panthers. The Cougars never operated from the Argentine aircraft carrier, ARA INDEPENDENCIA.

The Cougar had a short life in Argentina. By late 1964 both aircraft were grounded because of a lack of spare parts. 3-A-152 was scrapped, but 3-A-151 survives as a gate guardian at the Armada Argentina Headquarters in Buenos Aires.

The Aviacion Naval's Cougars were painted overall glossy sea blue with all markings and lettering in insignia white (except as noted on the drawings). The national flag was placed on the nose instead of the usual position on the rudder. This was a decidedly non-standard color scheme for a Argentine Navy aircraft.

Jorge Nunez (SAFCH #395)



1^o ESCUADRILLA AERONAV. ATAQUE badge
DETAIL 2

AIRFIX Vertol UH-46A (1/72 scale): Now moulded in medium grey plastic, it would at first appear to be the Vertol 107 in a new box, but thankfully no. The APU exhaust has been added to the rear of the aft rotor pylon. Checking the fuselage against the excellent drawing in KOKU-FAN #77, there is a discrepancy of 1/4 inch. This seems to be throughout the fuselage, so correction is not easy. The slope of the fairing behind the forward rotor head is too steep, the transmission tunnel along the top of the fuselage is too shallow by 1/16 inch. The cockpit side doors are too large but can be altered at the painting stage (reduce width at rear edge). Rotor heads and undercarriage have minimal detail. The decals are for a machine belonging to HC-1 aboard the USS SACRAMENTO. The painting instructions suggest AIRFIX M2 Slate Grey; this should be Engine Grey 20F2 (Methuen reference).

Colin A. Burgess (SAFCH #402)

ROO-DECALS: Once more available are these excellent decals from Down-Under. (1) RNZAF 1/32 scale Corsair and Kittyhawk, \$4.14. (2) RNZAF 1/48 scale Corsair, Avenger, and Dauntless, \$4.14. (3) RNZAF/RAAF 1/72 scale post-war aircraft, \$4.63. (4) RNZAF 1/72 scale Corsair, Dauntless, Avenger, Catalina, and Kittyhawk, \$4.14. (5) RNZAF/RAAF 1/32 & 1/48 post-war aircraft, \$4.63. (6) RAAF 1/48 scale WWII and post-war C-47, \$4.72. (7) USAF 1/32 scale F4J Phantom Screamin' Eagle, \$4.63. (8) TAA 1/100 scale Boeing 727, \$4.66. (9) Ansett 1/100 scale Boeing 727, \$4.66. (10) TAA 1/144 scale Boeing 727, \$2.43. Ansett 1/144 scale Boeing 727, \$2.43. (11) QANTAS 1/100 & 1/144 scale Boeing 747 & 707 (1/100) and Boeing 747 (1/100), \$4.14. Available from Belenma Enterprises, 247 High St., Freemantle, 6160, Western Australia. Please include two IRCs with all enquiries.

CESSNA T-37C ASAS DE PORTUGAL

The Portuguese Air Force Aerobatic Team, flying six T-37Cs, became a reality in 1976 when the Air Force Chief of Staff accepted the RAF invitation for the participation of the PAF in the Greenham Common Air Tattoo 1977, nominating the T-37 Training Squadron as his official representatives. In fact, this decision was understood by all T-37 Instructor Pilots as the best reward for their traditional interest and enthusiasm in the practice of aerobatic manoeuvres in formation flight since the beginning of the Pilot Basic Training Squadron in 1963. However, the primary mission of the team members still is instructing new pilots, which means that they have to spend many of their relaxation hours practising.

The "ASAS DE PORTUGAL" aerobatic team, according to its mission, promotes a public image of the PAF's efficiency, contributing to the expansion of the Air Force, rousing the interest among young people and acting as the PAF's representative in international meetings.

Under the command of Captain Feliciano Borralho, the maintenance crew consists of 10 technicians; 6 responsible for the general maintenance and repairs and the other 4 covering specific areas such as engines, avionics,

smoke systems and explosive devices. Most of a display's success lies in the skill and professionalism of these men.

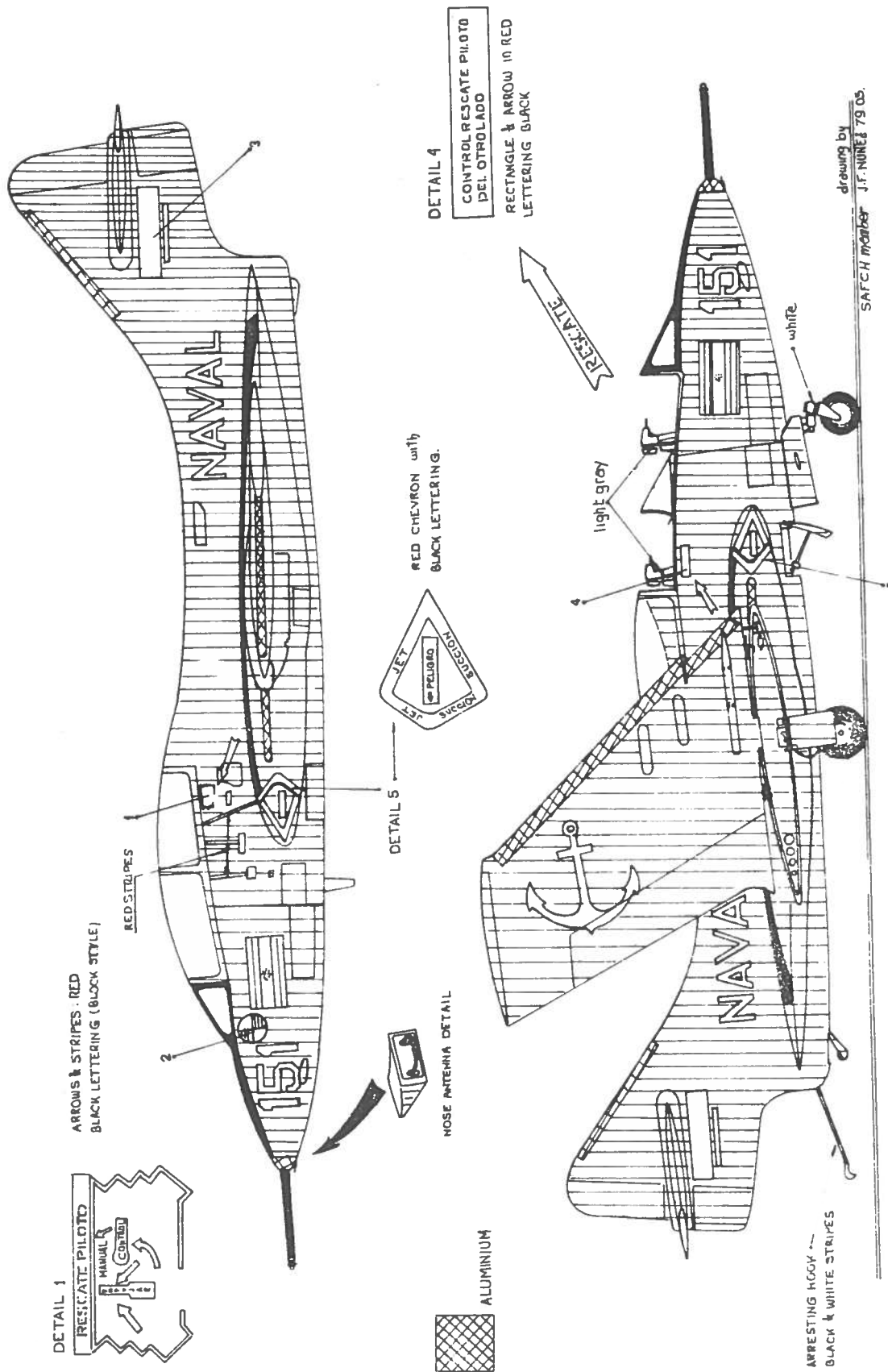
Team members: 1. Maj. Antonio Gomes, Age 35, 3600 hrs; 2. Lt. Albino Costa, age 29, 2350 hrs; 3. Lt. Mario Vaz, age 30, 1200 hrs; 4. Maj. Miguel Pessoa, age 33, 2250 hrs; 5. Lt. Antonio Morgado, age 27, 1050 hrs; 6. Capt. Joao Oliveira, age 32, 2200 hrs. Public Relations, Capt. Antonio Matoa, age 33, 2550 hrs. Logistics Officer, Lt. Rui Louro, age 30, 1900 hrs.

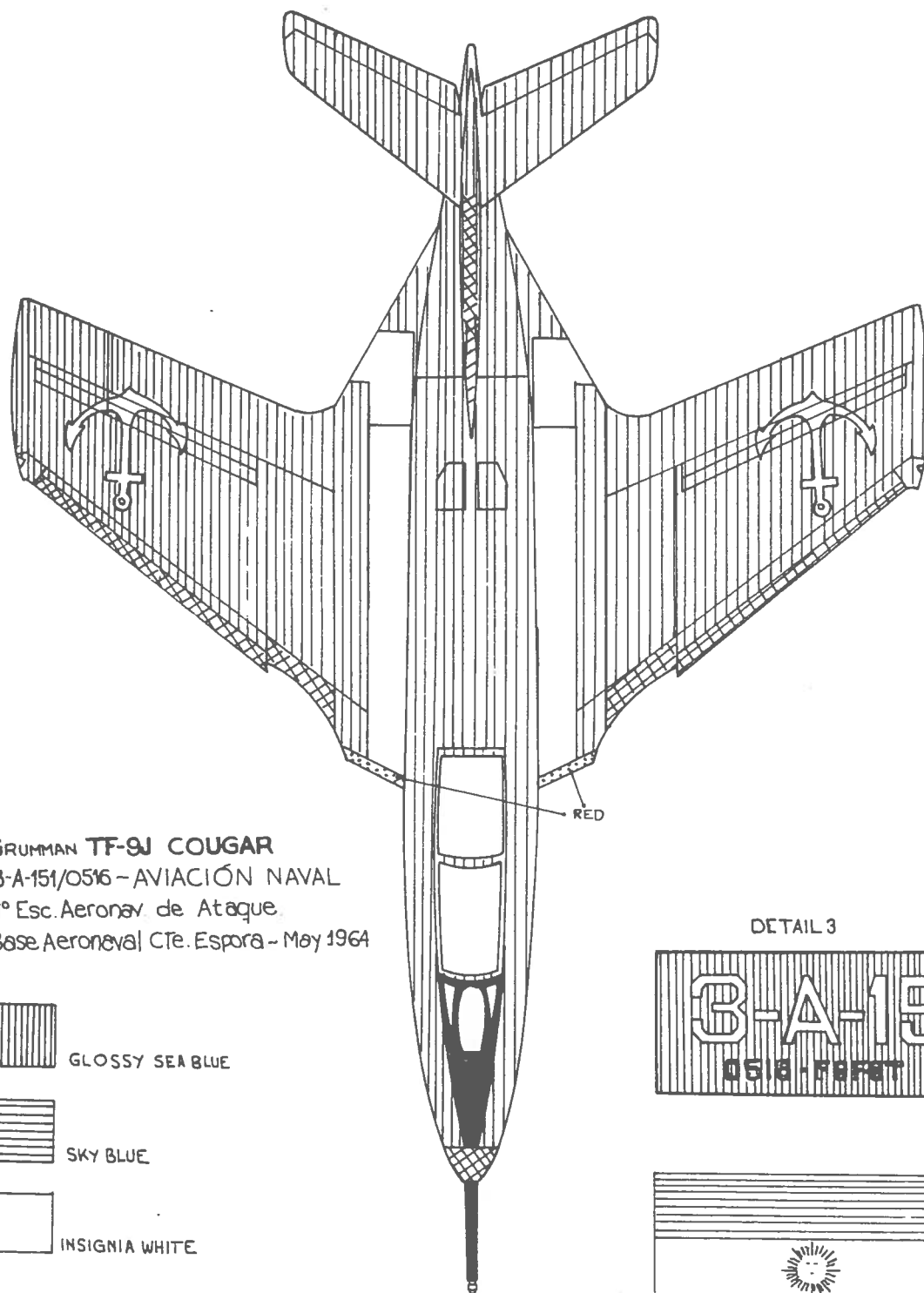
Aircraft at Greenham Common 1979: 2406, 2414, 2415, 2423, 2426, 2429, and 2430.

Modifications to be made to the HASAGAWA kit: 1. Reduce size of the radome aft of the cockpit to the size shown on the drawings. 2. Add 1/8 in. (3 mm) to each wing tip. 3. Remake ejection seats (model after the seats in the HELLER F-86F). 4. Delete antenna posts on tailplane.

References: Koku-Fan #69. Replica in Scale Vol. 3, No. 1 (also gives markings for Columbia, Greece, Turkey, Brazil, Thailand, and Vietnam T-37s).

Colin A. Burgess (SAFCH #402)





GRUMMAN TF-9J COUGAR
 3-A-151/0516 - AVIACIÓN NAVAL
 1º Esc. Aeronav de Ataque
 Base Aeronaval CTe. Espora - May 1964

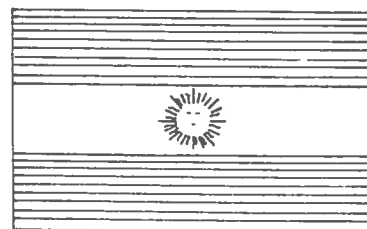
 GLOSSY SEA BLUE

 SKY BLUE

 INSIGNIA WHITE

drawing by
 J. F. NÚÑEZ 7905

DETAIL 3



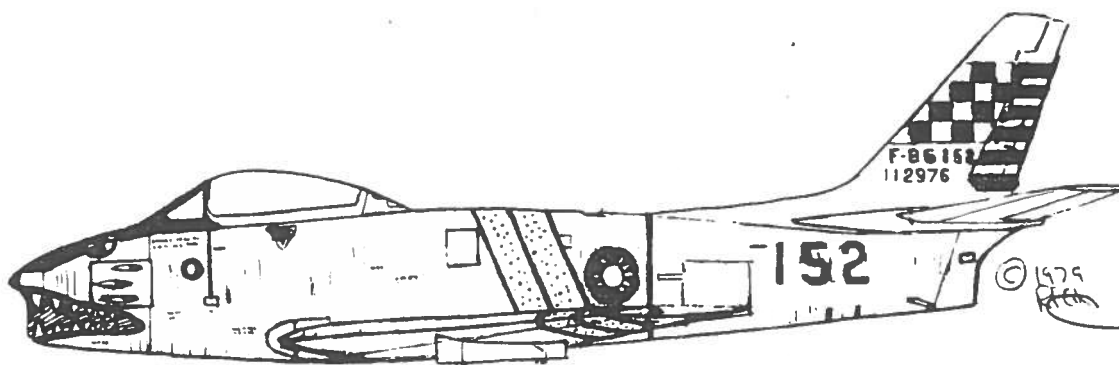
NATIONAL INSIGNIA

CONFLICTS, COUPS, CRISES, AND CLASHES

A Survey of Third World Air Combat from 1946 to the Present

No. 1. North American F-86F Sabre, 3rd Fighter Wing, Chinese Nationalist Air Force.
QUEMOY CRISIS, August-October 1958.

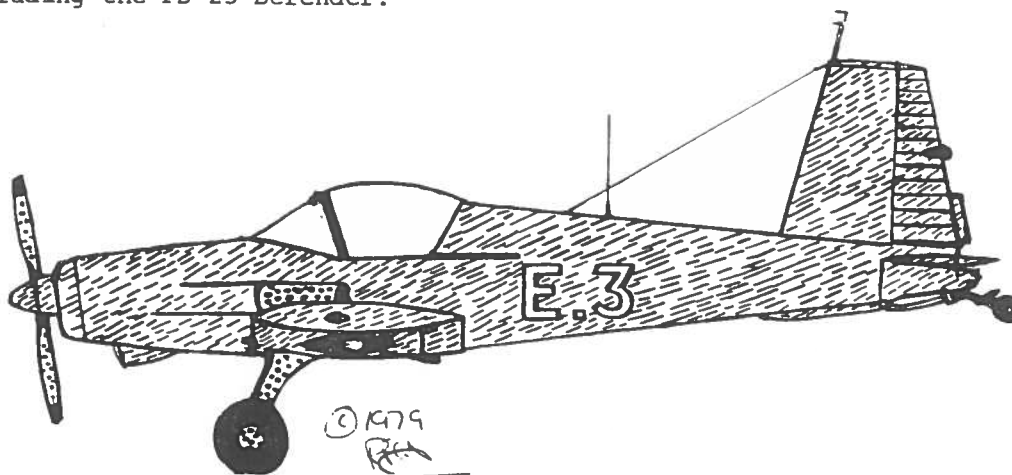
The on again, off again Chinese Civil War was on again with the Chinese Communists attempting to blockade supplies to the Nationalist garrisons and civilians living on the islands of Quemoy and Matsu. Nationalist control of these islands, close to Mainland China, thwarts the use of the port of Amoy as a base for invading Taiwan. There were many instances of heavy air actions. Nationalist Chinese F-86s were the first to use the Sidewinder missile in combat -- with numerous kills, including MiG-19s, to their credit.



Natural metal overall. Black/yellow fuselage and wing stripes. Black/white checkerboard on tail. Sharkmouth red, white teeth, black outline. Eyes black, white, with black outline.

No. 2. Fletcher FD-25B Defender, Royal Khmer Aviation.
Cambodia, ca. 1959.

As early as 1959 the military situation in Cambodia was well along its downhill plummet from bad to worse, there being frequent border clashes with its age-old foes in Thailand and South Vietnam. Some of these "incidents" involved aircraft of varying types including the FD-25 Defender.











Dark Green (or olive drab) overall with natural metal were indicated.

This is the first two parts of a series by Ron Andrini (SAFCH #458). Anyone wishing to help Ron should write to him at 238 State St., San Mateo, CA 94401.

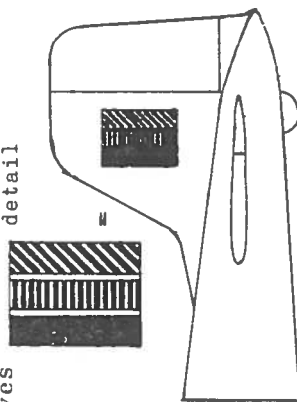
AIR FORCE INSIGNIA OF AFRICA

BY FRITZ BRAUN

15.) KENYA (independent 12.12.1963)
Air Force since 1964.
Name: Kenya Air Force.








Colours:  = black
  = dark crimson
  = white
  = dark green
Applied on:  = fuselage: yes
  = wings: 4 x
  = fin: yes
  = rudder: no

in use:
since
1964 to
date.

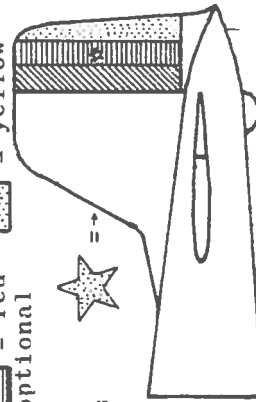
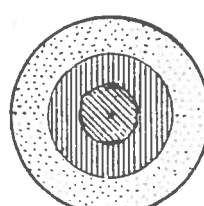


The black stripe of the fin flash is on both sides facing forward. At the DHC-2 Beaver it was applied in a slightly different shape: broader than high.

16.) CAMEROON (independent 1st October 1961)
Air Force since October 1961.
Names: l'Armée de l'Air du Cameroun (French) and
Cameroun Air Force (English).








Colours:  = green
  = red
  = yellow
Applied on:  = fuselage: optional
  = wings: 4 x
  = fin: no
  = rudder: yes

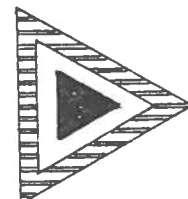
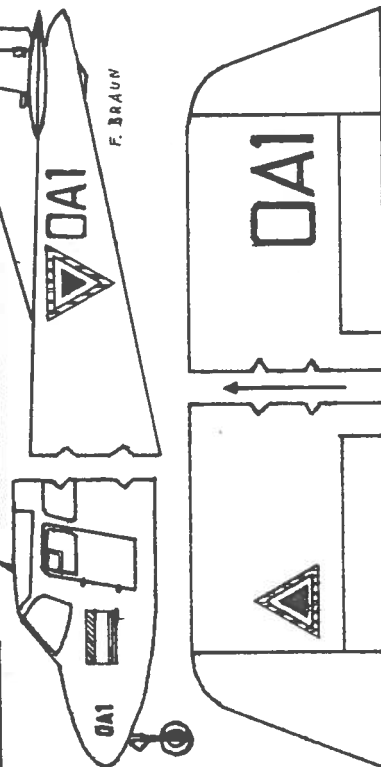
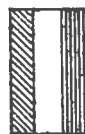
in use:
1961 to
date.



Uncamouflaged aircraft without fuselage roundels, a camouflaged DHC-4 Caribou had it but no rudder stripes. The small star in the rudder is yellow and was added with effect of 9th May 1975.

14.) BOTSWANA (independent 30.9.1966)
Air Force since autumn 1977.
Name: Botswana Defence Force

Colours:  = light blue
  = black
  = green
  = red
Applied on:  = fuselage: yes
  = wings: 3 x (!)
  = fin/rudder:
 over both



The triangle insignia appears in a reversed position on the wings as shown in the drawing of the lower surface, but only on the port side. On the starboard wing half is the aircraft code OA1 (resp. OA2, OA3). Upper wing surface: Only triangle insignia on both sides.


The small flag on both sides of the nose is the Botswana Defence Force Flag. All codes in black, camouflage scheme dark green and tan. Aircraft type: Britten-Norman BN2A-21 Defender.

15.) SOMALIA (independent 1st July 1960)

Air Force since July 1960.

Name: Cuerpo Aeronautica della Somalia (until 1963)

now: Dayuuradaha Xoogga Dalka Somaliyeed

Colours:  = light blue

 = medium blue (old fin flash only)

Applied on:  fuselage: yes

wings: 4 x

fin: no

rudder: until 1963

only, no exact date

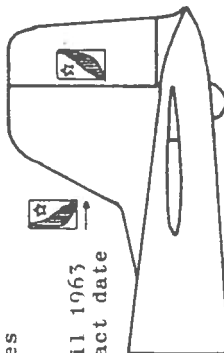
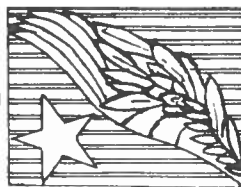
known, now

deleted.

= in use:

1960 to

date.



The old tail insignia was no medium blue ribbon (in all previous publications!) but a wing with feathers in medium blue and most probable black contours. A real photo (APN) of a C-47 shows this quite clearly. My drawing for the ASA is probably the first one ever published. Above both sides are shown. © Fritz Braun 1981

18.) MAURITANIA (independent 29th November 1960)

Air Force since 1960.

Name: Force Aérienne de la République Islamique de

Mauritanie

Colours:  = green

 = white

Applied on:  fuselage: yes

wings: 4 x

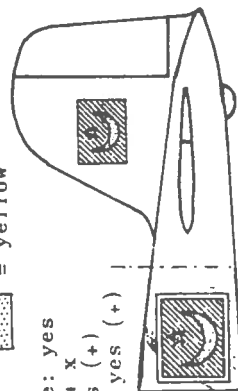
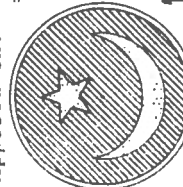
fin: yes (+)

rudder: yes (+)

in use:

1960 to

date.



(+) = depending to the shape of the empennage, on C-47s it is on the rudder. White outline on both insignias only on camouflage

During the early years it is said that the thin outline was in yellow. Flag insignia normally also on the fuselage, with disc however also known (seldom).

The crescents vary from rather 'flat' to strongly curved:

⑤:



Confirmed by photographs of C-47s!


Fritz Braun


20.) MADAGASCAR (MALAGASY) independent 26th June 1960

Air Force since summer 1960.

Name: Armée de l'Air Malgache (initially)

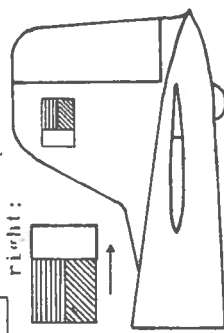
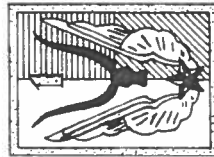
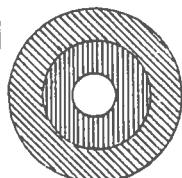
Armée de l'Air Madagascar (since circa 1978)

Colours:  = white

 = black

 = chrome yellow

right:



Applied on: Roundels probably only on the fuselage, but very seldom. On the wings: Not known. Fin flash on both sides, the white vertical stripe is thinly outlined in black. The rectangular insignia appears only on both sides of the fuselage near the cockpit. The white portion is on both sides on the left half as shown above. Both wings, star and No. 1 (significance not known) are thinly outlined in black, including the wing contours, but the outer 'frame' is in plain chrome yellow.

The yellow colour indication has been deleted in the both wings for better visibility of the fine black details.


The five points of the small star are in the middle divided thinly in black, the right halves (when seen clock-wise) are yellow, the left halves are in white.

17.) UPPER VOLTA (independent 5th August 1960)


Air Force since 1960.

Name: Force Aérienne de Haute-Volta

Colours:  = black

 = white

 = red

 = yellow

Applied on:  fuselage: yes

wings: 4 x

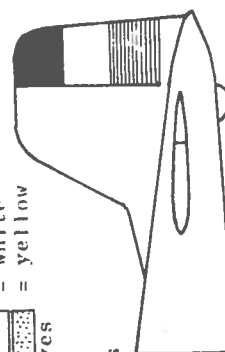
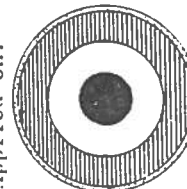
fin: no

rudder: yes

in use:

1960 to

date.



The roundels have their yellow outline only on machines in camouflage paint scheme, not on bare metal

THE NORTHROP T-38/F-5 IN SERVICE
(UPDATE #2)

This summary is a complete update, incorporating information available to this writer as of February '79. The abbreviations used are: (AW) Aviation Week, (FLT) Flight International, (IDR) International Defence Review, (AI) Air International, and (A&M) Aviation & Marine.

ABU DHABI:

The now defunct magazine "Asia Plane" reported in their Vol 2 #1 issue that they were operating some F-5s. Nothing more has been heard about this and in view of the AI (June '77) report that they had rejected the F-5 in favor of the Mirage 5, it is safe to assume that the "Asia Plane" report was in error or based on preliminary information.

ARGENTINA:

Some early reports showed F-5s on order, however, there has been no indication of this firming up so it is safe to assume that there is no further interest in this aircraft.

AUSTRALIA:

Some mention was made in AW (8 Dec '75) about an interest in the F-5E for 1977 delivery but nothing more has been heard about this.

AUSTRIA:

Austria is still trying to decide what they will do about their air defence. According to FLT (3 Feb '79) the leading contenders are the Kfir and the F-5E with their decision date now expected in 1979. Their dilemma is well reported in IDR (#2 '77).

BRAZIL:

Most sources agree that Brazil is operating 36 F-5Es and 6 F-5Bs. AI (June '75) reported that their first three F-5Bs arrived in country on 12 March 1975.

CAMBODIA:

Other than an old report in FLT (26 July '73) that they were going to receive some F-5s to strengthen their air forces, nothing more has been heard. It seems clear that with the present situation in that part of the world, this report is doubtful, at best.

CANADA:

The feature article in AI (April '75) relates the rather complex history of their CF-5s. Further reports in AI (Jan '75) indicate that 433 Sq may be transferred to Europe in support of NATO. The Canadian magazine "Sentinel" (Jan '78) has a picture of a CF-5A in service with the "Warlocks", an aerobatic group of 425 Sq performing at North Bay.

In a new development, CAF has been influenced by their exposure to the USAF "Aggressors" and has started up some aggressor units of their own. The aircraft used are the two seat CF-5Ds of 419 Sq (stationed at Cold Lake, Alberta) and the camouflage is based on the USAF Aggressors, with some Canadian differences. Thanks to Greg Marshall for this information.

CHILE:

AI (Dec '74) reported that the first batch of their 15 F-5E and 3 F-5F were scheduled to arrive in May 1976. In a separate development FLT (11 Feb '78) reports that the Shafir missile has been ordered from Israel. Is this intended to arm the Chilean F-5E/F fleet in place of the usual Sidewinder?

CHINA (TAIWAN):

AW (29 May '78) has quite an article on the CAF. The F-5E is being built under licence at the Aero Industry

Development Center at Taichung. Two wings are operational now and a further two are planned, but no exact numbers have been reported. AI (April '75) reported that they had bailed 30 T-38As from USAF. FLT (26 Nov '77) reports that they too have bought the Shafir missile from Israel. Can we assume that they are for their F-5E fleet?

AW (21 Aug '78) reported that they are interested in a new version, identified as the F-5G which is to carry the AIM-7 Sparrow missile. However, other news reports indicate they might not get this new version, if it is developed at all.

COLOMBIA:

AF (Dec '74) reported that Colombia ordered some F-5s. AW (24 Nov '74) refined this report further, saying that they wanted two or three F-5Bs as trainers, presumably for their Mirage pilot candidates. Nothing more has been heard of these reports until recently, when AI (Jun '78) quoted the Colombian Commander-in-Chief, Gen. Alonso Rubiano, "Six T-38s have been delivered for training at the Military Air Academy."

ECUADOR:

Ecuador's attempts to supplement their Jaguar fleet with F-5Es and the U.S. refusal to sell to them, has been well reported in the press. However, AW (7 Mar '77) reports that the U.S. Secretary of State, Cyrus Vance, feels that the F-5 is less sophisticated than the Kfir which they also tried to buy. Does this mean that the U.S. may have had a change of heart? Since that report is over a year old with no further news, it seems probable that Ecuador's request for F-5s will quietly wither away.

EGYPT:

Most news reports say that Egypt will get 50 F-5s although the exact split between F-5E and F-5F has not been announced. AW (22 May '78) says that eight F-5Es will be shipped this fall. These aircraft were originally scheduled for Ethiopia, but then their political situation made such a drastic change recently, these aircraft were embargoed and, thus are available for shipment to Egypt.

ETHIOPIA:

AI (July '77) credits Ethiopia with receiving 8 F-5Es before their political upheaval when all further shipments were embargoed. The number of active F-5As and F-5Bs in their service is unclear, but since their spares support was stopped, the serviceability of their F-5A fleet is questionable. In addition, AI (Sep '77) said that Somalia claimed to have shot down 3 F-5s, presumably by G/A missiles.

GERMANY (WEST):

Most sources agree that they have a training base established in the U.S., using T-38As. The number of aircraft on strength is quoted as being between 45 and 90 (quite a spread!). The aircraft are painted just like U.S.A.F. trainers with no distinguishing markings at all.

GREECE:

Various magazine reports credit the HAF with 73 to 95 F-5As, F-5Bs, and RF-5As. This country could be very interesting for a markings specialist because of the various camouflage schemes involved. Originally, some of these aircraft were received painted silver (really aluminized polyurethane). Then some were delivered to Greece in Jungle Camouflage (green, green and tan). Also, some were painted locally,

with local versions of the Jungle Camouflage and with noticeable variations in color (and with the black anti-glare panel retained on the nose). Then we know they received some aircraft from Iran to make up for normal attrition. Were these aircraft silver or Desert Camouflage (brown, tan and green)? And were they repainted to match the rest of the fleet? Thanks go to Peter Stenzel for his assistance with this color scheme data.

GUATEMALA:

FLT (25 Feb '78) and AI (Apr '78) both agree that Guatemala is going to attempt to buy a small number of F-5Es, possibly 6. However, Interavia's Air Letter (11 May '78) indicates that the deal is dead, largely due to the current U.S. policy in reducing arms sales.

INDONESIA:

Various news sources agree that they have ordered 12 F-5Es, however, Aerospace Daily (27 Jul '78) mentions 8 F-5Es and 4 F-5Fs which is probably correct.

IRAN:

Iran has been the largest F-5 user, starting with the F-5A. At one time, they were credited with approximately 100 F-5As, 22 F-5Bs and 16 RF-5As but, since then, most of these aircraft have been transferred to other countries. FLT (28 Aug '75) says they transferred 24 F-5As and Bs to Jordan, 50 to Pakistan and some unknown amount to So. Viet-Nam. Other reports dispute these numbers and FLT (17 Jan '76) reports some went to Ethiopia. The magazine The Aeroplane (Sep '75) reports that they sent some to the Yemen Arab Republic (North) and AI (Feb '76) says that the last Iranian F-5A was part of a shipment to Greece. FLT (30 Jul '77) now credits them with 141 F-5Es and 28 F-5Fs in 3 fighter/bomber squadrons. FLT (26 Nov '77) also reports that they are now carrying the Maverick missile on a single rail launcher.

The current political upheaval in this country will certainly affect their F-5 fleet, and the serviceability may be expected to decline.

JAPAN:

AI (Dec '72) reported that Japan was considering purchasing F-5Bs and F-5Es but the Prime Minister stopped the deal in favor of their own aircraft.

JORDAN:

A feature article in AI (Sept '75) goes into the details of the Royal Jordanian Air Force. In addition, most sources agree that they have between 14 and 24 F-5As on strength (ex-Iranian A.F.) and between 30 to 36 F-5Es and probably 2 F-5Fs on order.

Some of their aircraft have been camouflaged after receipt (probably the F-5As, and there are variations in the camouflage pattern (and probably the colors too). Thanks again to Peter Stenzel for his assistance.

JUGOSLAVIA:

An old report indicated that they were interested in some F-5Es but since nothing else was picked up by the press, it is safe to assume that nothing came of it.

KENYA:

Most sources agree that Kenya is getting or has gotten a total of 12 F-5E/Fs. In addition, FLT (28 Aug '75) reported that they had gotten some used F-5As. This report was picked up by AI (Oct '75) as 10 to 15 ex-Iranian F-5A/Bs.

KOREA (SOUTH):

Most sources credit the ROKAF with 4 squadrons of approximately 70 F-5As and 1 squadron of 10 RF-5A recon aircraft. They are also credited with from 4 to 14 F-5Bs, depending on your source, with the latter number the most probable. An unknown number of their F-5As were transferred to So. Viet-Nam, so the 70 number in their inventory is suspect. The ROKAF has ordered between 60 and 72 F-5E/Fs which are in process of delivery.

KUWAIT:

AI (Jul '77) reported that Kuwait requested 24 F-5E and 2 F-5Bs but, since there have been no other reports on the subject and since they bought Mirage F-1s and Douglas A-4s, this report seems doubtful.

LEBANON:

An old report in AI (Dec '72) to the effect that they were considering the F-5E resurfaced in AI (Jul '77). However, it is difficult to believe that their political situation has stabilized enough to allow this.

LIBYA:

Most sources agree that they had between 7 and 9 F-5As, which were inoperable, in storage. Some reports claim that they were transferred to Turkey and others claim that they were sent to Pakistan. A report in FLT (26 Jul '73) says "The planes reported as being sent to Pakistan might be the ones referred to by Uganda that were received from a 'friendly country'." FLT (14 Aug '75) also reported that they might buy some of the ex-South Viet-Nam F-5A/Bs, but they do not say from whom.

There are so many contradictions that it is hard to believe any of the above reports, however, the latest item from FLT (6 May '78) sounds most probable, "Seven ex-Libyan F-5s are reported to have been cannibalized to help keep the (Turkish) force operational."

OMAN:

AI (Feb '75) claims that the Sultan of Oman's Air Force is to be augmented by Iran. The type of aid is not specified but it is likely to be F-5. Since this report has not appeared elsewhere, and since the Omanis have recently gotten Jaguars, it seems probable that the Iranian F-5 assistance may have been in the form of a temporarily detached unit serving there, possibly in a training capacity in which case they would have used F-5Bs.

PAKISTAN:

It is generally agreed that Pakistan now operates approximately 50 F-5A/Bs and that most of these were transferred from Iran. It seems clear now that those ex-Libyan F-5s were never transferred to Pakistan after all, despite all the reports that they did. FLT (3 Apr '76) and AW (22 Mar '76) both report that they evaluated the F-5E but it is not clear from corroborating reports if they made a decision to acquire any.

PERU:

Numerous reports indicate that Peru has received SU-20s from the Soviet Union in place of the F-5Es that they originally hoped to obtain.

PHILIPPINES:

Most sources agree that the PAF has had one squadron of F-5As and Bs in service. The numbers quoted vary, depending on the source, but are about 15 F-5As and 3 F-5Bs. There were reports that they were interested in some F-5Es and some negotiations were in progress, however, they eventually bought surplus U.S.N. Vought F-5 Crusaders.

PORTUGAL:

The U.S. Congressional Record for 14 March '77 records that 6 T-38As were loaned to Portugal. Obviously, this is as good an authority as can be found and most magazine reports echo this transfer. No photographs of these aircraft in Portuguese service have surfaced as yet. Perhaps some of our readers can be of service here?

MALAYSIA:

No controversy here. Most sources agree that they have 14 F-5Es and 2 F-5Bs, serving with their #12 squadron.

MEXICO:

The U.S. magazine Time (13 Feb '78) reports that Mexico is interested in buying \$150 million worth of F-5E's. FLT (25 Feb '78) and AI (Apr '78) re-inforce that report, adding that the number will be somewhere between 20 and 26. However, Interavia Air Letter (11 May '78) says that the deal is quietly dead. In view of the announced U.S. policy of reducing arms exports, this seems very probable.

MOROCCO:

Most sources credit Morocco with operating 2 squadrons of from 22 to 24 F-5A/B/RFs. These aircraft have been in action against the Polisario forces and AI (Apr '76) says that one F-5A was shot down by a SA-7 missile. FLT (17 Feb '79) claims another F-5 was shot down by the guerrillas, according to an Algiers radio announcement. Other losses include 2 that collided and crashed near Marrakech while participating in Independence Day air show activities. A number of reports indicate that they have been trying to buy about 20 F-5E/Fs but Interavia Newsletter (2 Mar '78) says that U.S. plans to sell aircraft to Morocco have been "deferred indefinitely." The report was not specific and so whether their F-5E/F deal was included is not clear at this time.

NETHERLANDS:

The Netherlands coproduced (with Canada) their own version of the F-5A and B: the NF-5A and NF-5B. Most reports generally agree that they have 75 NF-5As and 30 NF-5Bs in service with 314, 315 and 316 Sq.

NORWAY:

Norway is one of the oldest operators of the F-5A/B. Most sources agree that they have 3 squadrons operating about 70 F-5As in the fighter/bomber role, one recce squadron with about 16 RF-5As, and one training squadron with about 14 F-5Bs.

SAUDI ARABIA:

Most sources agree that the Saudis have ordered 20 F-5Bs and approximately 120 F-5E/Fs, most of which have been delivered. These are probably the most advanced F-5E/F produced to date, with Maverick missile capability on the F-5E/F and a special cockpit laser designator on their F-5Fs, according to AI (Nov '75). FLT (25 Nov '77) agrees with the Maverick capability and adds that they can carry the French Matra Magic A/A missiles on the wingtips in place of the more usual Sidewinder. FLT (4 Mar '78) further says that the Saudi F-5E/F also have Shrike capability.

FLT (24 Jan '78) carried a fine article on the Saudi Air Force, its current composition and some history.

SINGAPORE:

Earlier reports indicated that Singapore's interest in the F-5E/F had waned, however, later reports in AW, FLT show that they are getting 18 F-5Es and 3 F-5Fs.

SPAIN:

Spain built their own F-5A/B under licence as the SF-5A and SF-5B. AF (Dec '74) credits them with 36 SF-5A/s and 36 SF-5Bs. FLT (28 Aug '75) identifies 211 Sq as having 18 SF-5As and 2 SF-5Bs. 212 Sq is credited with 18 SRF-5As (recce) and 2 SF-5Bs. Other SF-5Bs are apparently on training duties.

SUDAN:

Early Sudan interest in the F-5E/F was spurned by the U.S. State Department. DMS Intelligence (16 Jan '78) reported that Saudi pressure on the U.S. reversed this decision and apparently an order for an unspecified number of F-5E/Fs is somewhere in the works. This is basically confirmed by Aerospace Daily (6 Apr '78).

SWITZERLAND:

It has been well reported that the Swiss are in the process of getting 66 F-5Es and 6 F-5Fs, most of which will be built in Switzerland. FLT (7 Jan '77) gives a lot of the background for this deal.

THAILAND:

The Thai A.F. has had one squadron of F-5A/B on strength. The different sources vary in the exact number of aircraft involved, but 12 F-5As, 4 RF-5As and 2 F-5Bs are probably the maximum. This does not take into account the confusion that went along with the fall of So. Viet Nam. There may well have been one or two aircraft escape to Thailand. Since that time, Thailand has been busy upgrading their Air Force and AI (Dec '75) reports they ordered 13 F-5Es and 2 F-5Fs. The defunct magazine, Asia Plane (Vol 2 #1), reported the amount as between 16 to 30 F-5Es, and AW (8 May '78) quotes the U.S. administration as favoring "18 additional F-5E."

TUNIS:

Most reports indicated that Tunis was interested in 10 F-5Es and 2 F-5Fs. AI (Sept '77) carried the news that the negotiations stopped, in favor of the Aermacchi 326. In FLT (11 Feb '78) it is reported that "The F-5E is currently on order and will carry Sidewinder."

TURKEY:

Turkey has between 5 to 9 squadrons of F-5A/Bs and RF-5As totaling between 88 and 176 aircraft, depending on your source. The often-reported ex-Libyan F-5As have finally surfaced in Turkey and these aircraft were used only as spares to keep the rest of the fleet going during the U.S. embargo of military equipment, according to AW (13 June '77) and FLT (6 May '78).

The earlier AI (May '74) report of Turkish interest in producing 200 F-5E/Fs is apparently dead. Nothing more was heard about it after their purchase of F-104s from Italy. A somewhat smaller purchase of F-5E/Fs is still possible according to AW (13 Feb '78) although they are also considering the Aermacchi 339.

UGANDA:

It had earlier been reported that "a friendly power" has donated a squadron of ex-Libyan F-5As to Uganda, their crews being trained in Libya. This seemed almost plausible, but the more recent reports in AW (13 June '77) and FLT (6 May '78) indicate that those aircraft really went to Turkey, after all.

U.S.A.:

1,187 T-38s were built and most are still active in their training duties at various bases. A detailed study of all their assignments would be beyond the scope of this compilation. However,

the T-38 does serve in the Navy's Aggressor squadrons, test pilot's school, China Lake facility, and in NASA's astronaut training facility, at Edwards A.F.B. and with the Thunderbirds.

The U.S.A.F. also uses an undetermined number of F-5A/B/E/Fs as trainers to work up foreign students and in their own Aggressor training. Overseas Aggressor deployments have been announced at Alconbury (England) and Clark Field (Philippines).

AI (Apr '76) reported on an AT-38 version which was to be used as a "lead in fighter" with a centerline pylon for training stores. Nothing more was heard until AW (Feb '78) ran a photo of some T-38s carrying centerline pylons with training stores, but the caption identifies them as T-38Bs.

VENEZUELA:

Most reports agree that they bought 16 CF-5As and 4 CF-5Ds from Canada. FLT (14 Aug '75) said that USSR had offered to sell ex-South Viet Nam aircraft to them, but since nothing more has been heard of this deal, it seems safe to assume that it never went thru.

Various reports indicate that they have lost one of their CF-5A and one CF-5D.

VIET NAM:

The Viet Nam story is still far from clear and a study would be quite a project to carry out. However, Asia

Plane (Vol 3 #1) reported that "some" of their aircraft had been put back into operation by cannibalizing. News reports indicate that they have used some of their planes against Cambodia and more recently against the People's Republic of China.

YEMEN ARAB REPUBLIC (NORTH):

A&M (Sept '75) reports that they will replace their MIG-17 with a squadron of F-5s. Apparently Saudi Arabia transferred 4 F-5Bs to Yemen according to AW (21 Nov '77) with the approval of the U.S. State Department.

The newspaper "Los Angeles Times" (12 Feb '79) carried an article that the U.S. is prepared to sell 12 F-5s to Yemen, if Saudi Arabia will pay for them, according to U.S. Defense Secretary Harold Brown. The same information is also reported by AW (19 Feb '79) who also points out that this deal has yet to get Congressional approval.

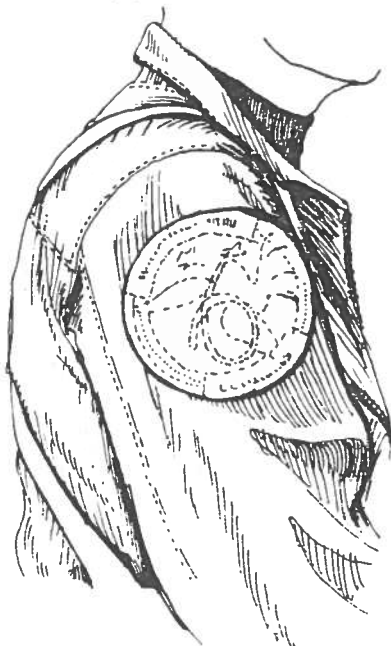
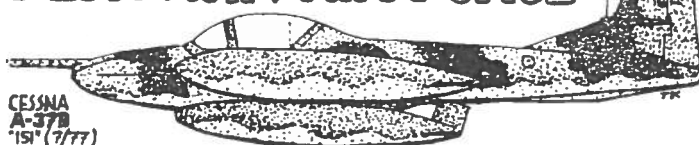
ZAIRE:

AI (Oct '73) carried a report that the U.S. State Department gave their O.K. that Zaire be briefed on the F-5E, however, no other reports back this up.

This summary is as good as the sources available to me will allow it to be. Anyone having information which will correct or amplify any of these entries is urged to contact the writer; please believe that I appreciate your help.

Gus Morfis, 4709 Greenmeadows Ave., Torrance, CA 90505.

PERUVIAN AIR FORCE



This large unit emblem (all embroidered, as worn on flight suit of F.A.R. pilot at left in 1973) consists of a light blue disc surrounded by rings in the national colors of red-white-red. The segments with the black lettering are also white, as are the vapor-trail "6" and the aircraft-symbol.

The fighting cock has a red head and tongue (beak and eye in white) and red claws/spurs. The neck and rear body are in yellow; and the segments of the body, from the front, are blue, yellow, green, blue. The wing and tail-feathers are two shades of green (or perhaps just difference in reflection of silk threads?).

INFORMATION FOR ILLUSTRATIONS PROVIDED BY ROBERT J. PICKETT -SAFCH

DRAWN BY TED KOPPEL FOR safc/s small airforces collector

(UNIT) INSIGNIA



AIRCRAFT OF THE SMALL AIR FORCES

SRI LANKA (CEYLON)

Alford Oxford
Call 473P
" 20-A Jet Ranger
Deane 15G
" 337
Convair C1-440
DeHavilland Dove
" Heron
" Canada DHC-1 Chipmunk
Bouglas DC-3
Funtin Jet Provost T.3, T.51
Ilkoy Ru-26
Mikoyan-Gurevich MiG-15UTI
" " MiG-17
Riley
Scottish Aviation Pioneer C.C.1, C.C.2
Westland-Sikorsky Dragonfly

1 OR 2
 73/76* 6
 73/76* 10
 /76* 6
 /76* 4
 /76* 1
 55/76* 6+?
 73/76* 4
 53/76* 12
 /76* 2
 /73/76* 8
 /75/76*
 73/76* 1
 73/76* 5
 /76* 2
 73 4

CHINA

Aero Super-Aero 45
Aerospatiale SA. 321 Super Frelon
Amoy H.E. Pan Primary Trainer
Antonov An-2 (L.M.)
Aviakhin P-1, M-5
" U-1 Avrushka
Avro 621 Tutor
" Avian IV
Beriev Be-6
Boeing PT-17 Kaydet
Breguet 14/400
Consolidated B-24J Liberator
Curtiss C-46 Commando
" Hawk II
deHavilland D.H.98 Mosquito
" Canada DHC-2 Beaver
Douglas C-47 Dakota
" O-2MC4
Feilung Hiryo No.1 G.P. Seaplane
Handley Page HPR 7 Herald
Harbin Hai Lun-Kiang No.1
" Sungari No.1
Ilyushin Il-2m3
" Il-10
" Il-12
" Il-14M
" Il-18
" Il-28
" Il-28U
Junkers-Fill F.13
Kawasaki Ki.48 Type 99
" Ki.61 Type 3
Lavochkin La-9
" La-11
" La-15
Lisunov Li-2
Loening-Keystone Amphiban
Manshu Ki.79 Type 2
Mikoyan-Gurevich MiG-9
" " MiG-15
" " MiG-15bis
" " MiG-15UTI
" " MiG-17
" MiG-19
" MiG-21
" MiG-21F
" MiG-21PF
Mil Mi-1
" Mi-4
Mitsubishi Ki.51 Type 99
" Ki.57 Type 100
Nakajima Ki.34 Type 97
" Ki.43 Type 1
" Ki.84 Type 4 Hayate
North American B-25H, J Mitchell
" " F-86F Sabre
" " P-51D Mustang

/76* 13
 33/
 /75/76*200
 26/
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 /76* 14
 49/68
 46/
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 33/
 49/
 58/
 65/
 2
 58/
 /76*
 /75/76*
 52/76*300
 49/
 50/
 /76*
 33/
 50/76*200+
 52/
 /75/76*1,500+
 58/76*2,000+
 /75/76* 75+
 /75/76* 50
 46/49
 45/
 49/
 63/
 50/

N.W.T.U. Yenan No.1 Utility
Peking Bei-Jing No.1 Transport
" Sha-Tu No.1 Light Transport
" Red Banner No.1 Utility Transport
Petlyakov Pe-2
Polikarpov Po-2
" R-5
Republic P-47D Thunderbolt
Shenyang An-2 Fong Shou No.2
" Chinko No.1 G.P.
" F-9
" Medium Bomber
" MiG-15UTI
" MiG-17
" MiG-19
" MiG-21(F-8)
" Multi-Purpose Fighter
" Yak-18
Sikorsky R-6
Sud-Aviation SE-3160 Alouette III
SZD 1S-3 ABC Primary Glider
" 1S-3 " -A " "
" 1S-4 Jastrab Sailplane
" -8 Jaskolka Sailplane
" -9 Bocian Sailplane
" -12 Mucha-100 Sailplane
" Salamandra 53A Primary Trainer
Tachikawa Ki.54a Type 1
" Ki.54c Type 1
" Ki.55 Type 99
Tchan Tia-Kuo ABC-A Primary Glider
" " " China-Salamandra Prim. Gl.
" " " Jie-Fang No.1 Sailplane
" " " Primary Glider
" " " SZD-8 Jaskolka
" " " SZD-12 Mucha-100 G1
Tupolev SB-2
" Tu-2
" Tu-4
" Tu-14
" Tu-16
" Tu-70
VEB Flugzeugwerke Dresden Il-14P
Vickers 843 Viscount
Vought V-65-C1 Lenin
Watanabe E13A1 Type O
Yakovlev Yak-9P
" Yak-11
" Yak-12
" Yak-14
" Yak-16
" Yak-17UTI
" Yak-18

NATIONALIST CHINA

Bell 47G
" UH-1H
Boeing 720B
" -Stearman PT-17 Kaydet
Convair B-24J Liberator
" P4Y-2 Privateer
" PBY-5A
Curtiss-Wright C-46A,D Commando
Douglas C-47
" DC-6
Fairchild C-119G
" C-123 Provider
Grumman HU-16A,B, SA-16A Albatross
" S-2A Tracker
Hughes 500M
Kawasaki KH-4
Lockheed F-104A,B,G,RF-104G,TF-104G
" T-33A
Martin RB-57
McDonnell RF-101C
North American B-25C Mitchell
" " F-86F Sabre
" " F-100A,D,F

/73/76 3
 75/76 50
 /73 1
 58/
 /73
 /58/75
 58/76 40
 /73 2
 /73/76 100
 /76 5
 /73/76
 /73/75 10
 /73/75 6
 /73 2
 73/76 71
 58/76
 /73
 /73/75 4
 54/73 20
 73/76 90

51B, RF-51B Mustang	58/73
" " F-51B Texan	75/76
" " F-51A (A-1) A1DC XT-CH-1	73/76 100
" " F-51B Thunderjet	54/
" " F-51B Thunderbolt	
" " F-51B	73/76 7

COLUMBIA

51B, RF-51B Mustang	58/73	7
" " F-51B Texan	75/76*	27
" " F-51A (A-1) A1DC XT-CH-1	73/76*	16
" " F-51B Thunderjet	73/	1
" " F-51B Thunderbolt	53/	27
" " F-51B	54/66	2
" " F-51B	63/76*	10
" " F-51B	69/	7
" " F-51B	71/	1
" " F-51B	35/42	4
" " F-51B	41/57	60
" " F-51B	56/73	6
" " F-51B	54/	6
" " F-51B	53/58	2
" " F-51B	69/76*	10
" " F-51B	68/76*	30
" " F-51B	42/51	14
" " F-51B	46/76*	13
" " F-51B	34/52	16
" " F-51B	30/48	1
" " F-51B	28/33	1
" " F-51B	34/45	3
" " F-51B	32/39	7+?
" " F-51B	33/50	6
" " F-51B	33/46	30
" " F-51B	32/45	30
" " F-51B	72/76*	14
" " F-51B	73/76*	2
" " F-51B	72/76*	2
" " F-51B	54/54	1
" " F-51B	51/76*	20
" " F-51B	73/76*	4
" " F-51B	32/46	4
" " F-51B	32/39	2
" " F-51B	55/73	19
" " F-51B	44/76*	13
" " F-51B	54/76*	15
" " F-51B	34/39	3
" " F-51B	44/54	12
" " F-51B	71/76*	1
" " F-51B	34/44	4
" " F-51B	33/33	1
" " F-51B	72/76*	4
" " F-51B	63/65	1
" " F-51B	54/76*	10
" " F-51B	68/76*	18
" " F-51B	32/39	5
" " F-51B	33/50	6
" " F-51B	32/40	3
" " F-51B	32/	1
" " F-51B	32/52	8
" " F-51B	61/76*	6
" " F-51B	31/	2
" " F-51B	43/59	1
" " F-51B	68/76*	3
" " F-51B	58/66	16
" " F-51B	64/	4
" " F-51B	54/76*	26
" " F-51B	21/	2
" " F-51B	21/25	4
" " F-51B	42/73	99
" " F-51B	47/57	3
" " F-51B	63/66	2
" " F-51B	63/76*	6
" " F-51B	46/58	2
" " F-51B	58/65	1
" " F-51B	52/55	3
" " F-51B	21/25	3
" " F-51B	46/56	35
" " F-51B	34/43	3
" " F-51B	47/	1
" " F-51B	25/33	10
" " F-51B	24/31	1
" " F-51B	27/	3

PEOPLE'S REPUBLIC OF CHINA

Aerospatiale Alouette II	73/	1
" " III	73/	1
" " H202/Freco	73/76	1
Antonov An-24	73/76	1
Douglas C-47	73/76	1
Fokker F-28	73/76	1
Ilyushin Il-14	73/76	1
Max Holste MH1521A	73	1

COSTA RICA

Cessna U-17A	73/76	1
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CUBA

Aeronca L-3	73/76*	1
Antonov An-2	73/76*	1
" " An-24	73/76*	1
Bellanca Aircruiser		
Boeing-Stearman PT-13		
" " PT-17		
Curtiss JN-4D	17/	1
" " Wright 19R		
deHavilland D.H.4B (U.S. Beaver)	23/	6
" " Canada DHC-2 Beaver	57/	3
Douglas C-47		
Grumman G.21 Goose		
Howard DGA-15		
Ilyushin Il-14	73/76*	1
Lockheed T-33A	55/	4
Mikoyan-Gurveich MiG-15	73	12
" " MiG-15UTI	73/76*	75
" " MiG-17	73/76*	40
" " MiG-19	73/76*	50
" " MiG-21	73/76*	30
" " MiG-21UTI	73/76*	30
" " MiG-21MF	73/76*	24
Mil Mi-1		
" " Mi-4		
North American AT-6		
" " B-25J Mitchell		
" " P-51D Mustang		
Stearman A73-B1	75	1
Sukhoi Su-7B	23/	4
Vought UO-2		
Waco D-7		
Westland Whirlwind (on order 1958)	73/76*	2
Zlin 226	76*	1
" " 326		

CYPRUS

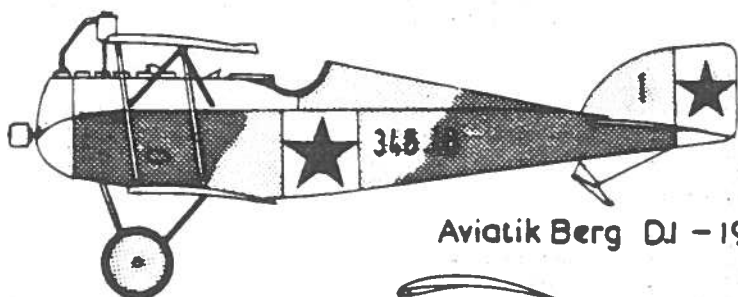
Agusta-Bell A.B.47J	73	1
Fairchild-Miller FM-1100	73	1

DAHONEY

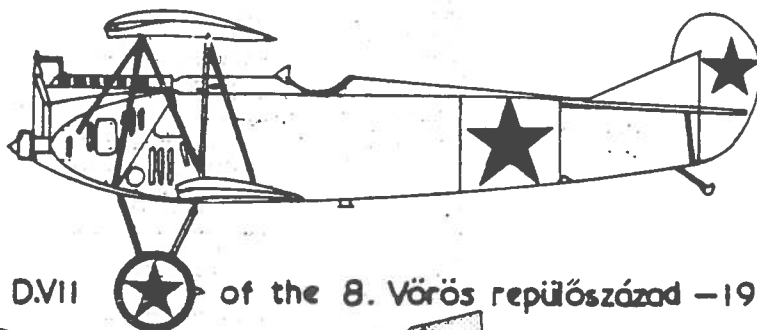
AeroCommander 500B	73	1
Aerospatiale Alouette II	73	1
Douglas C-47	73	1
Max Holste MH1521A	73	2

This is the third part of a continuing series on the aircraft of the world's air forces by Chris Thornburg. Chris writes, "I still need help with Czechoslovakia, France, and Italy. When these are done, I will have lists for all countries except US, GB, and USSR which will not be covered in this series." Anyone wishing to help Chris with these countries or with additions or corrections to the lists already published should write, Chris Thornburg, 134 Governors Dr., Forest Park, GA 30050, USA.

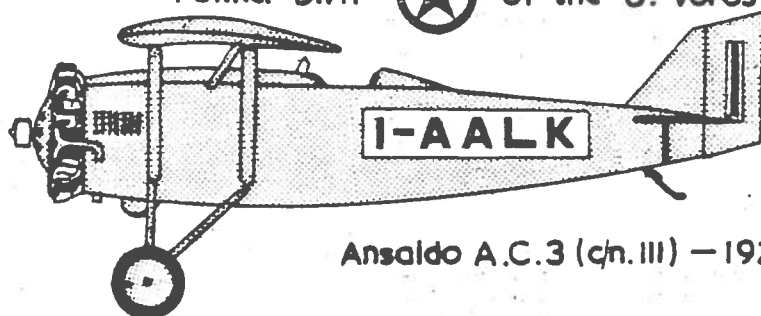
Hungarian fighters 1919-34



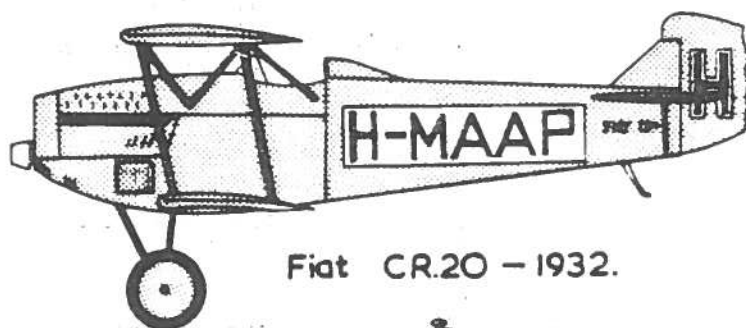
Aviatik Berg DJ - 1919.



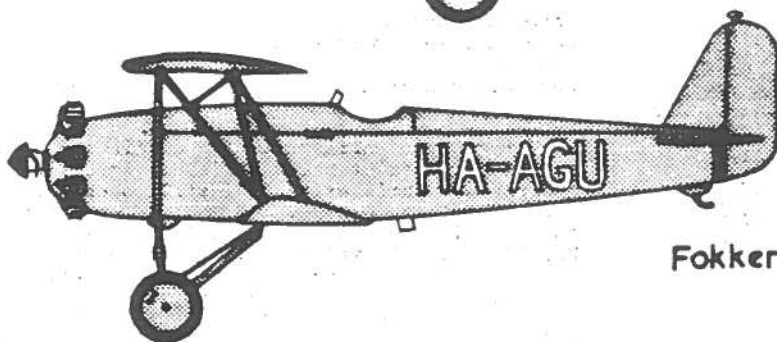
Fokker D.VII of the 8. Vörös repülőszázad - 1919.



Ansaldo A.C.3 (qn.III) - 1929.



Fiat CR.20 - 1932.



Fokker D-XVI - 1934.